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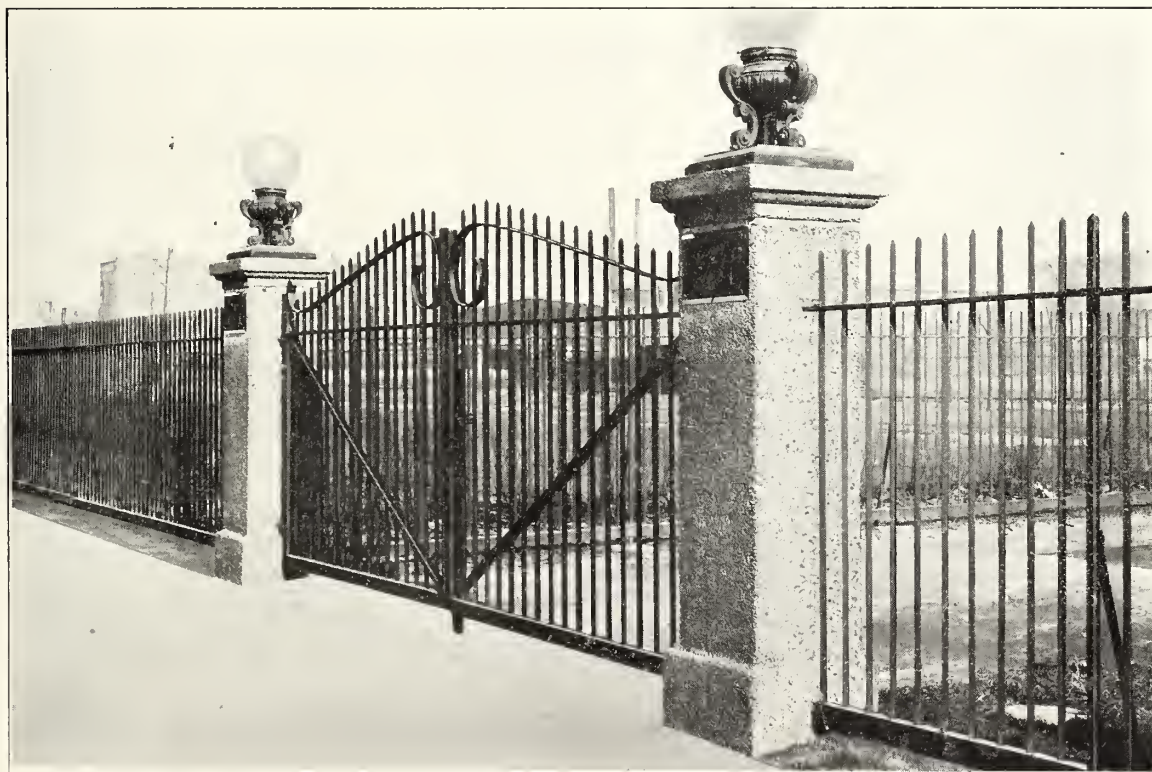
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MARCH, 1914

SPECIAL FEATURES IN THIS ISSUE

Hardier Evergreens for the Northwest—Two Important Cemetery Tax
Cases—Interesting Plan for Cemetery Addition—Spring Work on Earth
Roads—Complete Development of Modern Cemetery—Insect Damage
to National Park Trees



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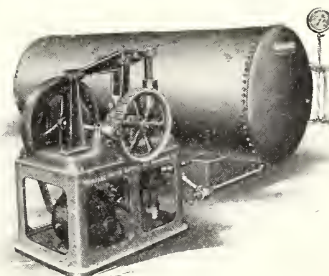
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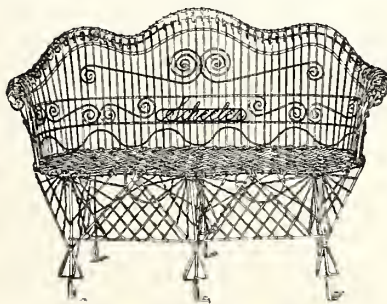


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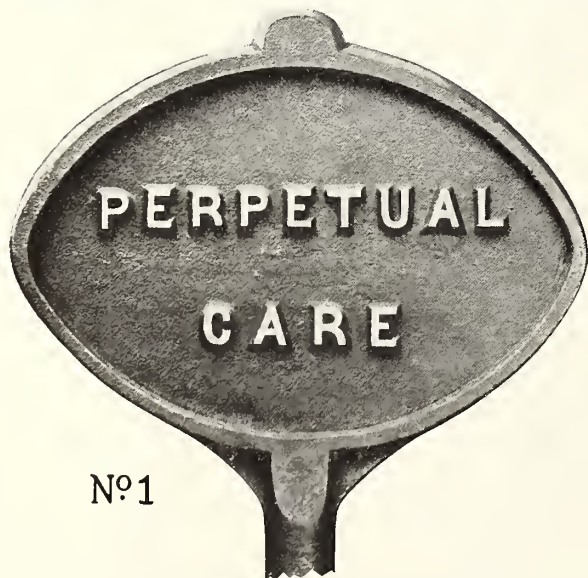
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MARCH, 1914

EDITORIAL

VOL. XXIV No. 1

Value of Good Country Roads

The direct effect that changing bad roads into good roads has upon land value and the general economic welfare of a community is shown in several concrete illustrations gathered by the U. S. Department of Agriculture. The Department has just issued a statement on the subject, based upon a mass of information gathered by the Office of Public Roads, which is making a special study of the economic effect of road improvement in the country. According to data gathered, where good roads replace bad ones the values of farm lands bordering on the roads increase to such an extent that the cost of road improvement is equalized, if not exceeded. The general land values, as well as farm values, show marked advances, following the improvement of roads. As the roads in no

way affect soil fertility or quality of the farm, advances are due essentially to the decrease in the cost of hauling produce to market or shipping point. Farms are now regarded as plants for the business of farming, and any reduction in their profits through unnecessarily heavy costs for hauling on bad roads naturally reduces their capitalization into values. The automobile also has begun to be an important factor in increasing rural values where good roads are introduced. Immigration is particularly marked where road conditions are favorable; in fact, the figures of the Department seem to indicate that good roads indirectly increase the demand for rural property.

Cemetery Taxation

The promotion of cemetery development as a commercial proposition, and the financial entanglements that have occasionally resulted, have brought about strong sentiment in several instances for the taxation of cemeteries. Two recent attempts to tax for street improvements and for sewers are reported in detail on another page, and should be carefully studied by all cemetery officials. The cemetery that devotes all of its revenue to the de-

velopment, beautifying and care of the grounds is in most cases freed of taxes by its charter, and the erroneous impression that all cemeteries are amassing enormous profits has been stimulated by financial operations in cemetery development. The question of taxation is a many-sided one, and every cemetery should carefully study every aspect of its relation to taxation and to local and state laws governing the rights and privileges of cemeteries.

Water Requirements of Plants

A review of the literature on the water requirement of plants, Bulletin 285 of the Bureau of Plant Industry, U. S. Department of Agriculture, in its 96 pages, supplies an extended bibliography of the subject and presents the results of the leading experiments and will be of unusual interest to park and cemetery planters. Among the topics considered are the effect of soil moisture content, soil type, cultivation, soil mass, fertilizers, previous crops, soil temperature, air temperature, shade, air humidity, carbon dioxide content of the air, parasites, the relative leaf area,

frequent cutting, defoliation, amount of growth or number of plants per unit of soil mass, and the bearing of the age of the plant on its water requirement. In addition, there is a consideration of the water requirement of different kinds of plants, and the determination of water requirement of crops under field conditions. The bulletin is the work of Dr. Lyman J. Briggs, biophysicist, and Dr. H. L. Shantz, plant physiologist, Bureau of Plant Industry, U. S. Department of Agriculture.

Editorial Notes

A property owner in St. Joseph, Mo., has brought suit to test the constitutionality of the new park district act under which this city is planning extensive park developments. In the city's motion for a rehearing of the Prospect Park case by the Supreme Court, Frank B. Fulkerson, city counselor, and W. B. Norris, retained as special counsel in the case, appealed to the court to pass upon the constitutionality of St. Joseph's park and boulevard law, so that the city will know how to proceed with the pending beautification projects. The members of the Park Board expressed the opinion at their meeting at the city hall recently that the judges of the Supreme Court did not differentiate between park districts and benefit districts in preparing their opinion, which, it is conceded, will result in the invalidation of the Prospect Park project, unless the court grants a rehearing in the case of Mrs. Mary C. Pash against the city.

A national arboretum is being established in Rock Creek National Park, District of Columbia. Eventually it will contain all American tree species which will thrive there.

The total amount of land purchased in the Eastern states for federal forests is nearly 800,000 acres. So far the principal work on these areas has involved their protection against forest fires.

Canada has 23,000,000 acres in timber reserves, as compared with 187,000,000 acres in the national forests of the United States.

In trying to find uses for blight-killed chestnut it has been found that it cannot be utilized for crating stone. Quarry owners say that chestnut wood leaves an indelible stain on the marble or granite.

Railroads caused nearly half the forest fires in Colorado and Wyoming last year, and almost one-sixth were set by lightning. In California lightning started more than half, with railroads a comparatively insignificant cause.

Minnesota has a forested area of 28,000,000 acres, the largest of any state east of the Rocky Mountains.

Canada has established a forest products laboratory in connection with McGill University at Montreal, on the lines of the United States institution of the same sort at the University of Wisconsin.

Tree planting on national forests has to be confined to comparatively short intervals in spring and fall. In spring it starts when the snow melts and stops with the drying out of the ground; in the fall it comes between fall rains and first snowfall.

INTERESTING PLAN FOR CEMETERY ADDITION

The construction and design of the new Annex to Oakwood Cemetery at Waco, Texas, presented several interesting problems, owing in part to climatic conditions, and in part to the extreme flatness of the ground.

First, a complete topographic map of the property, comprising fifty-nine acres, was very carefully made with contour intervals of one foot. From this was first drawn the general design of the cemetery at a scale of fifty feet to the inch, and showing all sections. Then sectional plans were prepared at a scale of twenty feet to the inch, showing all drives, walks, lots, and planting scheme, as well as location of all buildings, etc.

This new annex, adjoining the older cemetery as it does, made it necessary to keep in mind the design and topography of the old cemetery in order that at some future time the two Burial Parks may be combined into an harmonious whole. At present, the two cemeteries are conducted as separate institutions.

The site of the new cemetery being very flat, we were compelled to plan and construct elevation and depression in order to secure some diversity of contour. This necessitated the moving of some 8,000 yards of earth in the two sections at present completed, in addition to the removal



PLAN OF OAKWOOD ANNEX CEMETERY, WACO, TEX.

of the top-soil and such excavations as were necessary for building, etc.

The construction was under the personal supervision of the landscape architects at a time of year when climatic conditions

made operations extremely difficult. The long Summer drouth baked the earth so hard that grading was a slow and laborious matter and before it was completed the heavy Fall rains—in one instance more



THE CHAPEL, OAKWOOD CEMETERY, ANNEX, WACO, TEX.

than eight inches in twenty-four hours—impeded the work as well. The sewer system, designed to take care of such a large volume of water, fortunately, has done its work well, even during the recent heavy flood period experienced at Waco and vicinity.

Lawns are composed of the native Bermuda Grass; planting consists of trees and shrubs either native to Central Texas, or such as have shown themselves able to withstand four months of high temperature and drouth. The soil, of heavy gumbo, required much improvement. A fine stream of water was found at a depth of 28 feet, and a private water system has been installed, consisting of a 5 H.P. Electric Engine which discharges into a cypress tank of 25,000 gallons capacity, and frequent water connections, so that each lot and all lawns may receive a sufficient supply of water for all purposes.

Some of the interesting features of this modern Burial Park are an attractive office building situated near the main entrance, and connected with the formal garden by a pergola; a beautiful chapel and receiving vault erected at an expense of about \$10,000 on a site reserved for that purpose; superintendent's residence, stables, propagating beds and nurseries, so arranged that they do not obtrude themselves.

This Burial Park is constructed on modern lines, with handsome winding drive-ways, quiet, restful lawns, beautiful semi-tropical shrubberies, and brilliant flowers, and has already proven to be one of the show places of this thriving city. It is conducted upon the perpetual care plan and is receiving the support of the people of Waco and vicinity.

The total cost of this cemetery to date including entrance, grading, water and sewer systems, plantings, and expense for

our services in designing the entire cemetery and the work of supervision, together with about 1,500 feet of ornamental iron fencing, has been about \$12,500.00. This does not include the cost of buildings already erected and those under process of construction. Other sections will be developed as required. The improved land is fenced from that in use, and permanent trees will be planted in the part not now in use at the locations designated on the section plans, in order that they may be securing their growth while the cemetery is doing likewise.

The plan for this work was made and the improvements carried out by Clark & Pike, landscape architects, Willoughby, O. Eugene Early is president of the Waco Cemetery Association which operates Oakwood Cemetery and Annex; C. J. Glover, Secretary, and W. D. Rondthaler, manager.

COMPLETE DEVELOPMENT OF A MODERN CEMETERY

By OTTO SONNE,

Landscape Engineer.

III. Roads and Bridges.

In each case where the location of a road or a system of roads is to be designed it is to be considered first of all that it be made to fulfill the principal purpose that it is to serve, viz., give ready access to the points to be reached; next, that it be built where it fits the ground, *i.e.*, where the best grades and lines can be obtained with the least amount of earth-work, and then that lines and grades be determined with a view of giving the road the most attractive appearance consistent with the other requirements.

As to the principal purpose, then a highway is built to give direct access from one definite point to another, from a city, town or village to another, and a reasonably direct line is required, perhaps with some minor deviations to reach secondary points

near the line. A system of roads designed for the purpose of improving a limited tract of land, such as a suburban real estate development, requires other considerations; efforts should be made to locate the principal roads in such a way as to steer any possible through traffic over them and thereby increase their future importance, and in addition the entire area must be supplied with roads placed a suitable, generally uniform, distance apart, gauged to allow for building lots of the right size fronting on each of them and giving reasonably direct outlet from each lot to the surrounding highways. Again, on a tract to be devoted to park purposes exclusively appearances outweigh all other considerations; drives and walks should reach the points with the finest outlooks and pass

through the most varied scenery, but otherwise, where they come from and where they go to is of minor importance; they are not meant for people who are in a hurry to get somewhere, and it would be a doubtful advantage if any parkway should happen to create a direct connection between two busy thoroughfares.

On a large Cemetery the requirements are to a certain extent a combination of all the ones mentioned. There should be reasonably direct access, especially from the main entrance, to any point of the grounds; the entire area available for burial purposes should be covered with a network of roads and paths in a systematic manner to admit a suitable number of lots or graves between them, and at the same time advan-



A STRETCH OF SEVEN FOOT PATH FINISHED EXCEPT SODDING ALONG EDGE.



RUSTIC BRIDGES FOR SEVEN FOOT PATHS.



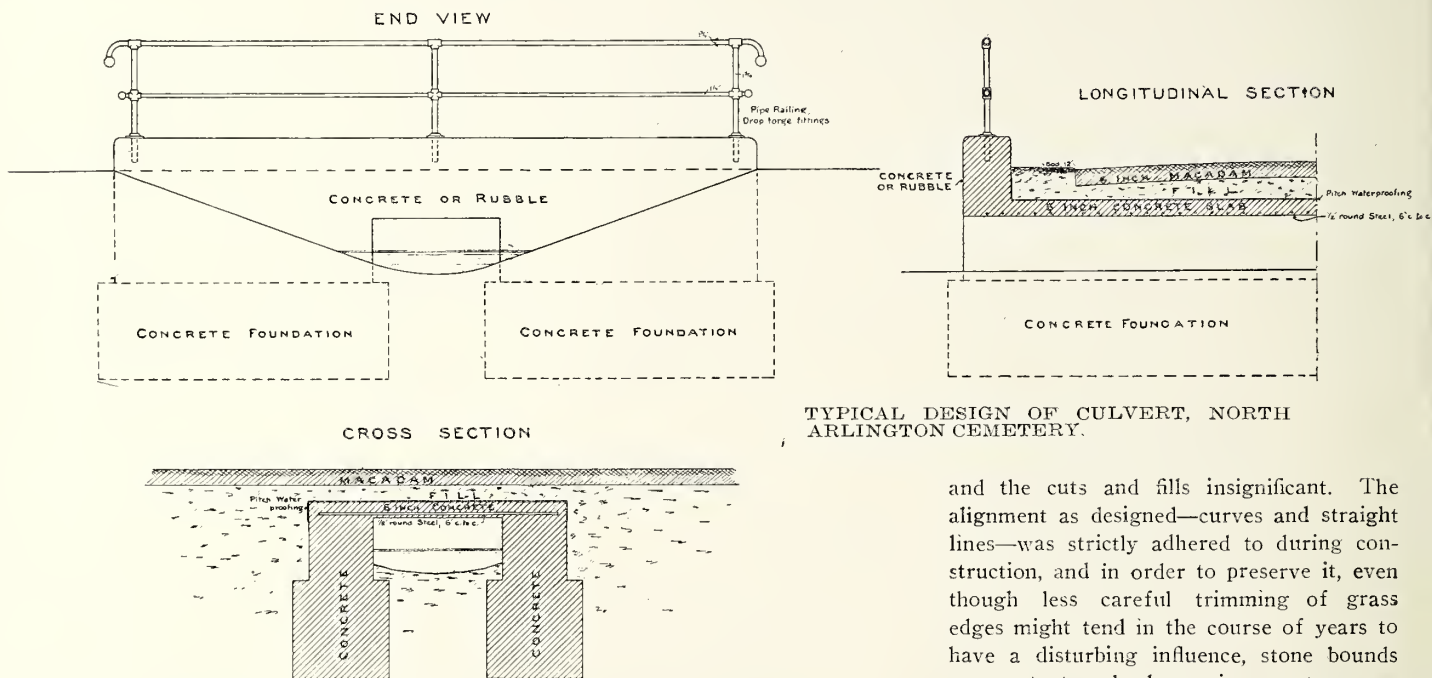
FIFTEEN FOOT ROAD JUST AFTER TRIMMING WITH SODDING.

tage should be taken to any available opportunity to give the cemetery the characteristics of a park.

fore an advantage, but it would be a serious mistake to have any of the roads form a distinct short-cut from one highway to

another; this would lead to an undesirable kind of traffic, contrary to the dignity and repose that should govern the cemetery.

The general plan of the North Arlington Cemetery, which appeared in the February issue of *PARK AND CEMETERY*, shows how the problem was handled in this instance. The main entrance from Kearney avenue has two parallel drives, each 18 feet wide, besides 10-foot sidewalks, and back of the entrance the roads spread out with a main system of drives 15 feet wide supplemented with paths seven feet wide, the paths wide enough and substantial enough to serve as drives, but intended in the main to be reserved for pedestrians. The alignment of the roads was influenced by the rolling character of the ground, but, as mentioned before, a careful topographical survey formed a reliable guide, with the result that a 7 per cent grade is an exception and a two-foot cut or fill equally so; in general the grades are very much flatter



TYPICAL DESIGN OF CULVERT, NORTH ARLINGTON CEMETERY.

and the cuts and fills insignificant. The alignment as designed—curves and straight lines—was strictly adhered to during construction, and in order to preserve it, even though less careful trimming of grass edges might tend in the course of years to have a disturbing influence, stone bounds were set at each change in curvature, one

The cemetery, although in a sense a public service undertaking, must be at least self-supporting, and the designer should aim to make as much of the area as possible useful for burial purposes and in every way enhance the value of each lot. Hence the roads should be designed close enough together to leave only a short walk over grass paths to the rear tiers of lots and with the minimum length that will accomplish this purpose. They should be built on graceful lines, and other means, such as planting and special features that may suggest themselves, should be employed to give the grounds a park-like appearance. This will attract others besides just the lot owners, and the pleasing surroundings and generous attendance of visitors will add to the sales value of the land. Such an attendance of visitors, passing through the cemetery in a leisurely fashion, is there-



BUILDING FIFTEEN FOOT ROAD; FIRST COURSE OF STONE LAID; BINDING GRANITE BEING SPREAD.

on each side of the road, in the grass, one foot from the true line. In this way this line can always be "picked up" and the location of lots be determined to a certainty even years after the original staking out. The vertical curves introduced between changes in grade were treated with as much care as the horizontal ones. The im-

the edges of the roads and paths, each of them connected through six-inch Akron pipe with the drainage system before mentioned, and this connection naturally the question of gutters or no gutters was given serious consideration, but decided in the negative. The gutters, if properly laid, will prevent a wash along the edge of the road,

Akron pipes, extending just outside the edge, at such intervals as to give connection to each lawn area. It may be desired later to extend water pipes, to supply new structures with underground electric wires or put in other appliances. These pipes or wires can then be pushed through the six inch pipe without disturbing the sur-



ARCHED BRIDGE CARRYING FIFTEEN FOOT ROAD.



CURVED BRIDGE FOR FIFTEEN FOOT ROAD; 125 FEET LONG; ROAD PARTLY FINISHED.

portance of this is often disregarded, but owing to the circumstance that a road is always viewed in a nearly horizontal direction and seen very much in foreshortening, any sudden change in the grade will appear very prominent and disturb the continuity of the curvatures as much as a sharp break in the horizontal alignment. The total length of roads is 6 miles 15 feet wide and $4\frac{1}{4}$ miles 7 feet wide.

The traffic on the drives on a cemetery differs materially from what is to be expected on a public highway. On the latter during late years the increasing use of fast automobiles and heavy trucks has necessitated numerous attempts at constructing a hard, smooth road surface to replace the formerly universal and satisfactory macadam, but on the cemetery the special cause of this change in construction should not be found, and for that reason a macadam surface, which up to the arrival of self-propelling vehicles has had the record of solidity and permanency, has here been considered the proper one to adopt, especially as the natural subsoil, consisting mostly of broken shale and hard clays, forms an admirable sub-grade. The construction of the drives was performed in the standard way, sub-grade prepared carefully and rolled with steam roller, six inches of broken trap applied in two layers, each of them supplied with binding and screenings respectively, watered and rolled, edges trimmed with sodding; in other words, there was nothing remarkable to distinguish it from other first-class work. The seven-foot paths were built with three inches of natural gravel surfaced with one inch of small-sized broken trap, also rolled and watered.

For the sake of drainage, catch basins have been built at frequent intervals along

but at a disproportionate expense. They represent a considerable outlay for construction, and, what is more, they occupy valuable ground. An eighteen-inch gutter along each side of ten miles of road would occupy more than 150,000 square feet, each square foot representing an expense for construction against an income for burial purposes. Against this is to be weighed the circumstance that each heavy rain is apt to cause some wash along the edge of the steeper parts of the roads, though in all but the most extreme cases affecting only the top dressing of screenings, but this damage is so easily taken care of by the ordinary force employed that it is considered insignificant in comparison with the means needed to prevent it altogether. The amount of water falling on the road areas is trifling; it is the lawns sloping towards them that supply the bulk of it, and naturally the most damage is to be expected during construction. During that period the roads have not yet become compacted in their full length, the future lawns are bare, either ploughed, harrowed or dug up, and each rain will form rills along the surface concentrating the flow and giving it vastly more momentum than it can attain after the finish when each blade of grass acts as a brake on the speed, tends to prevent rills and consequent concentration into definite streams. A secondary reason for leaving out gutters is their unsightliness. On a country lane or on a highway with a part of the right of way left in its natural state a gutter or even a ditch looks natural and inoffensive, but on a drive with well maintained edges and smooth lawns on the sides a gutter, build it as you may, of grass or stone, looks out of place.

A rather important feature is the placing under the roads of empty six inch

face of the road, whereas the digging up of a road of any kind will leave a scar that may not be healed entirely for years. The cost of these empty pipes is trifling, and if only a fraction of them is ever used it is well justified.

The brook flowing through the cemetery lengthwise has necessitated eight bridges to carry 15 foot drives and five for 7 foot paths. Owing to the shallowness of the depression through which the brook flows the headroom was decidedly limited and for most of the bridges it was an object to get along with as little as possible. For that reason a model was adopted for the drives, as illustrated, a typical design, simply a rectangular opening five feet wide, of whatever height available, covered with a reinforced slab of concrete and provided with the necessary wing walls, parapet with railing, etc. The width was made 20 feet in the clear to allow for a $2\frac{1}{2}$ foot strip of grass along the drive, and the height was gauged to leave room for a little fill between the concrete slab and the macadam. For variety's sake the material of the bridges was concrete or rubble as taste dictated. On three of the bridges the headroom permitted the use of an arch and thereby afforded an opportunity to introduce a little variety in design, rubble arches, pilasters and masonry piers in the railings, etc., giving an opening for further decoration with vases, etc. Considering the diminutive size of the brook one of these bridges makes quite an imposing impression, as on account of the conformation of the ground it has been given a length of 135 feet and is built to curve with the road. The bridges for the seven foot paths consist simply of rubble abutments carrying wooden superstructures and rustic railings of varying design.

(To be continued.)

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AND CONTRIBUTIONS

J. J. LEVISON, Brooklyn, N. Y., Sec.-Treas.

ASSOCIATION EMPLOYMENT BUREAU.

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furnish highest references as to ability to take charge of large city park system. Address "Politics," care Secretary Levison.

Wanted: Position as city forester or park superintendent desired by an experienced forester; reference to present employers. Address "W. L. B.," care Secretary Levison.

ASSOCIATION QUESTION BOX.

Undergrowth and Tree Life.

J. J. Levison, Secretary and Treasurer, American Association of Park Superintendents, Brooklyn, N. Y.

Dear Mr. Levison: I submit the following as a subject for helpful discussion in the columns of *PARK AND CEMETERY*. The conditions which prevail in the parks of Cedar Rapids are probably common in all the parks of the Upper Mississippi Valley.

The larger parks of Cedar Rapids are developed from natural timber, consisting principally of hardwood trees, including many *Quercus rubra* and *Quercus velutina*. In the natural timber, where there is a great deal of undergrowth and a thick layer of mulch, these trees flourish and are reasonably long-lived. If the undergrowth is removed, the mulch cleaned off and a sod established, the trees begin to die. During a hot summer, such as prevailed in this region in 1913, they died by the score. In an area of perhaps five acres in one of our parks, last year; fifteen trees died.

We have helped the trees somewhat, as soon as signs of failure were noted, by cutting off a part of the top and dampening the roots. Last fall we spread on heavy mulch over the sod around the trees and intend to let it remain as late as possible this spring, in the hope that this will give the trees some help to stand a hot, dry summer and the tramping of many feet. Having been growing in dense timber, these trees are tall, spindly and the tops are by no means large.

I would like the advice of the brethren, and especially your advice, as to the best methods of preventing the loss of so many of these trees. Of course, where they are thinned out in such numbers as to make replanting advisable, we substitute other and more symmetrical trees, and in the course of years the appearance of the parks will be better than before, but it is distressing to see so many trees die during the last summer. FRED J. LAZELL,

Dept. Parks and Public Property.
Cedar Rapids, Ia.

Your letter of the 19th is very interesting because it touches on a subject which concerns every park man and in which I was interested for a long time.

You have hit the secret of woodland preservation when you describe the healthy condition of your natural woodlands by stating that it has a heavy undergrowth and a thick layer of mulch. The main cause of the dying of the woodland trees in our parks has generally been due to the fact that it has been customary to rake off the leaves annually from these woodlands and to keep the growth so thin that the sun and wind find easy access to the ground and prevent the decomposition of the fallen leaves and causing the soil to dry up and become covered with grass. If our park woodlands would be kept well planted with trees and the ground covered with a heavy undergrowth of shade-bearing trees like the beech or hemlock and native shrubs, and the fallen leaves not touched at all, the conditions would be perfectly natural and there would be no cause for the dying of trees in these woodlands any more than in the wooded areas of our forests.

J. J. LEVISON,

Secretary, Am. Assn. Park Supts.

[The experiences and opinions of other members on this subject are invited for discussion in this department.]

Oriental vs. Native Sycamore.

Mr. J. J. Levison, Forester, Department of Parks, Brooklyn, N. Y.

Dear Sir: In your loose leaf pamphlet "T. 1-7" on the sycamore, you make the statement that the oriental sycamore is to be preferred to the American or native sycamore. One reason given is that the tree is much hardier.

I naturally have always taken to the planting of the oriental sycamore, as it is used largely in European countries, especially in France. Our nurserymen tell us not to plant the oriental species, as it is not hardy enough for this part of the country. In talking with men of experience in parks and private estates, I find that no sycamores are being planted any-

where. They all give their reasons that the trees are not hardy enough. Rockford is situated ninety miles west of Chicago and slightly to the north, and the native plane tree grows wild in places along the Rock River within half a mile of the city. These trees, I judge, have attained ages up to forty years and show no sign of winter killing or of any diseases.

Four years ago we bought a lot of sycamores of the oriental variety from Rochester, N. Y., and planted them in our parks. We had two very unfavorable dry summers after their planting, but found that they grew in spite of it. The first winter was extremely mild, with temperature not ranging lower than zero. The second winter we had temperature ranging from 88° above to 30° below. This zero weather continued for weeks and was extreme. The next winter, 1912-1913, was rather mild, with some days of extreme temperatures, ranging down to 15° below. Some of the trees which were planted near water have attained a height of 18 feet and are fully five inches in diameter. They measured 1½ at the time of planting. Other trees of the same batch which do not enjoy the advantage of water have grown to 3½ inches in diameter and 15 to 18 feet in height, but not nearly as luxuriant. We have not found any case of winter killing or any signs of winter injury like the cracking of the trunks, as shown so much in stock purchased from nearby nurserymen. On the strength of this showing we have planted 400 more trees of the oriental sycamore and naturally would like to keep on planting more from time to time, as we think the tree very desirable.

However, we are uncertain as to the advisability of this course, owing to the adverse opinion as to the hardness, and would ask your valued opinion in this matter. Our climate is very much the same as Chicago. We cannot winter outdoor rhododendron maximum or retinosporas, and a number of the evergreen trees thrive here.

I hope I have made myself clear in the matter as to the climatic conditions and trust you will be able to give me more satisfactory information. Perhaps opinions gathered through *PARK AND CEMETERY* would be of considerable help in clearing up this matter.

PAUL B. RIIS,

Supt., Rockford Park District.

Rockford, Ill.

You will please note that when I speak highly of the oriental sycamore in pamphlet "T. 1-7" of "Studies of Trees" it applies to Eastern conditions particularly.

Here, indeed, it is one great favorite, especially for street planting and other locations where the conditions for tree growth are favorable. In Brooklyn I have planted the oriental sycamore in large numbers for the past few years, in many cases under the most adverse conditions, and always found it to be hardy and quick growing. Last year we planted a large number of these species in a section where the atmosphere is literally filled with sulphur fumes and other injurious gases, and still not one of the trees failed. I know that in other sections of the East, notably Washington and Philadelphia, the oriental sycamore has also been planted very extensively and has proven quite desirable. In view of these experiences and considering your partial success, I would say in

reply to your letter that you go ahead planting and give the tree a chance.

As to the difference between the oriental sycamore and the occidental, we find the occidental is of slower growth and particularly subject to the disease *Gleosporeum nevisquum*, which attacks the leaves and twigs, causing the former to curl up and drop prematurely. The native specimens in this section of the country have seriously suffered from this disease within the past few years, while our oriental specimens have only shown slight attacks from time to time.

In accordance with your suggestion, I shall have your letter published in *PARK AND CEMETERY* and call for opinions from the superintendents of the country.

J. J. J. J. J.
Secretary.

MUNICIPAL RECREATION.

*By George A. Parker, Supt. of Parks,
Hartford, Conn., in the Hartford Courant.*

When municipal reaction comes into its own, it will be found as good a fighting machine against weakness, suffering, poverty and sin of a city as a fire department is against fire. It will be found as self-supporting as a water department and will double the efficiency of the people. This is a broad statement that no one will believe at present, but in ten years I believe it will become a recognized fact.

At first thought it seems impossible for recreation to do so much more than work and education have accomplished, which heretofore have been considered the great constructive forces of machines for the city building. Education is considered the foundation upon which our governmental future rests and work the source of success, and they are rightly so considered, but they have failed to accomplish more than they have, not because they lack power or capacity, but because they are out of balance with city life and because they did not give the proportionate place to recreation that belongs to it. For while recreation has not a constructive capacity in the same sense as work and study; yet it is the balance-wheel which stores up the surplus energy when there is any and gives it out when needed. Play is the natural balance and produces the desired equilibrium between the forces of life, producing as a resultant a healthy and natural city.

The other method of city building is the engineering principal of superior dominating force with a large percentage for safety.

Last year as I was fixing the banks of Park River in Bushnell Park, one of the best engineers in the state said to me: "You do things no engineer would dare to do, and yet they seem to work out all right." "Yes," I replied, "I seek the balance between the force entering into the stability of the bank, knowing that when

I find the bank will stay and be most beautiful, while the engineer seeks to build a structure that will resist the greatest forces that will come against it, and then add 60 per cent for safety."

The engineer's alignments and work are based upon a dominating and superior force; ours upon an equilibrium between forces. The viewpoints are entirely different.

No engineer would make the banks or brooks or rivers of the material that nature makes them. No one would think for a moment of making the banks of our Connecticut river of the silt that comes down in the water, and yet nature does so successfully, because she only desired the balance of the forces involved. Just imagine what it would mean were an engineer to build banks of all our rivers and brooks. In the same way the builders of our cities have tried to plan out what a city should be, to establish conditions that shall dominate the city for its own good, make its righteousness permanent. They depend upon intelligence, honesty, efficiency, education and hard work, continuous public teaching and other things to bring all these about. And all these must be, in order to obtain success. They are stones with which the city is built, but they are loose stones which do not bind together, and they are building without mortar; they are making bricks without straws. The reasoning is logical and contention is sound, but their expectations are not realized because they depend upon a dominate superior force with a large per cent for safety, and a city is a living organism, and living things are not built that way. Success with living things comes with balance of force, the same as nature makes the banks of our rivers and plants our forests.

Suppose engineers were to make the banks of all rivers in accordance with their theories it would take all the surplus labor

of the human race for centuries to enclose them all, and then they would not be as useful or beautiful or as permanent as nature's own banks. In the same way the cities are striving to do the unneeded thing, because some believe it best. Cities are spending large sums of money in just this way, until the burden of taxation has become hard to bear. Much of this will end when cities strive for a balance of the force within the city. In this balance of city force, recreation will play a most important part, more so because it has been neglected and ignored in the past. This neglect is the cause of much of the sin and misery and pain and poverty in the midst of those who live in cities.

Play has seemed such a trivial affair that until lately no one has taken it seriously as a factor in city life. A man said to me within a week, "There is too much play; people would be better off if there was less." True there is too much exploited, expensive, constructive, normal and natural play. I have often wished that I might gain the attention of the people long enough to demonstrate to them what real play is and the part it must take in the building up of life within a city, and to show how much there is that comes under the name of recreation that is no more like recreation than black is like white.

Recreation in its broadest sense is what we do during leisure time, that time when we do as we please. Work we must, or starve, and so work controls us as superior outside force.

Now, recreation is essentially different from these, for during those hours, we are free, no outside compelling force controls us, and the forces that do control us are from the inside out, while work and study are from the outside in. Recreation, then, is the natural growth. It responds to the call of the muscle, the organs of the body, and the functions of the mind and spirit, to move that they may grow and live, and like every response to our inner consciousness, there comes pleasure and joy in the doing of it. The child responds more freely and naturally to these calls, and is happy in its play and the grown-ups will receive just as great happiness in their recreation, even though it is not as boisterous if they will respond as freely as the child does.

Not only does recreation mean growth and development, but it means refreshment and restoration from fatigue and strenuous effort; it also means re-creating that which has been injured or destroyed in the struggle for existence. Here then, is the meaning of recreation, growth, refreshment, restoration, and re-creation, and apparently it is the only way these things can come into our city lives. No wonder then, that our cities have come short of their ideals when a factor of so much importance has not been considered in the equilibrium of the force that builds cities.

What a boy does in his leisure hours makes or breaks him, and the manner in which the leisure of a city is spent builds it up or tears it down. If recreation is doing what one pleases in one's leisure hours, then it would seem as if it were for the individual to care for, and not the city. What then has the municipality to do with it? Probably but little in the future city when balance of force has prevailed, but just now when the present city conditions are out of balance, and so many lives are stunted and oppressed, it has a great deal to do with it.

I think it is a safe proposition that whatever a city by its mis-management prevents a family or an individual from doing for themselves, the city is duty bound to provide. I do not believe in the city entertaining people, for that is play by proxy, the same as grooming takes the place of work, but I do believe the city should provide the opportunities, and then let the people do for themselves. From the very nature of the conditions the municipality as a unit is the only party that can successfully promote this function of a city. Schools,

churches, associations and individuals, can and do care most successfully for their special group, but after they have done all they can, the great majority of the people are still without opportunity.

It requires a person who can shut his eyes and with his mind's eye, see what the one hundred thousand people that make Hartford, are doing at any time. To do this, requires a certain quality of mind and training which is rather unusual and does not often exist, except in those in public life. Seldom does local interest develop that acuteness. It follows also that municipal recreation cannot successfully be divided between departments. The need of its being under one head is not now generally apparent, but it will become so as it develops.

Years ago, in the land of Judea, a country boy in a country dress with a shepherd sling and a pebble from the brook, killed the giant and defeated the army of the Philistines. Maybe recreation is to become our country boy, who by simple and natural methods will drive out and destroy that formidable and apparently indestructi-

ble modern giant, the wickedness of our city.

The last few days has been the coldest for several years, and yet they have hardly begun to be as cold as they would have been but for the sunshine that continuously envelops our earth, for our earth alone, would be dark and exceedingly cold. It may be recreation will be the sunshine which will bring health and happiness, peace and prosperity to our city, even as the sunshine brings light and heat to this world of ours. This may be difficult to believe. At first thought, it seems impossible for such a simple thing to bring about such results. That it will drive out evil, even as sunshine dissipates fog and darkness from the world. That it will do so I fully believe, therefore, I end as I began by repeating the words that, when recreation comes into its own, sin and suffering, poverty and pain, and weakness will either be destroyed or under control, that it will double the health, happiness and efficiency of the people who live in cities, and will become entirely self-supporting.

INSECT DAMAGE TO NATIONAL PARK TREES

By A. D. Hopkins, Expert in Charge of Forest Insect Investigations, Bureau of Entomology, U. S. Department of Agriculture.
(Concluded.)

The secondary enemies of the trees consists of numerous species which attack the bark and wood as soon as the trees become weakened and are dying from other causes. The *Dendroctonus* beetles are the primary enemies or leaders in the attack. The secondary enemies are to a certain extent their allies, and when very abundant may contribute to favorable conditions for rapid advance in the destructive movement, but more often they are dependents and scavengers, merely utilizing the dead and waste material. With rare exceptions these secondary enemies are not capable of killing trees on their own account.

The unfavorable conditions for the destructive work of these *Dendroctonus* beetles are to be found in administered forests, where the ripe or matured timber is utilized and where the young timber is protected by the prompt disposal of any clumps of dying trees during the fall, winter and spring months.

In other words, systematic forest management, based on a knowledge of the principles of silviculture and forest entomology, will soon present conditions so unfavorable for the *Dendroctonus* beetles that they can no longer exist as agents of destruction and waste.

The natural enemies of the beetles serve as a repelling force against the progressive development of an invasion. Indeed, they are among the principal factors which have prevented the extermination of certain of the more important forest tree species. These natural enemies consist of parasites and predatory insects, which feed on all

stages of the barkbeetles, and birds, which feed on the adults and young of the barkbeetles. Were it not for the fact that birds also feed on the predatory and parasitic insect enemies of the barkbeetles, and that they are so limited in numbers, they might render the great service that is so commonly credited to them. Insect diseases in the form of epidemics sometimes serve to bring an invasion under complete control. Unfavorable climatic conditions have been known to exterminate a species of *Dendroctonus* beetles within an area of thousands of square miles. Under natural conditions successive generations of the older trees are killed, but the invaders are checked or repelled by their natural enemies. Generations of younger trees take the place of their ancestors, and the forest as such is perpetuated.

In the national parks, national forests and private forests where the resources have a commercial value this natural control of the insect depredators on the timber is the most expensive and wasteful. Our friends, the enemies of the beetles, can not be depended upon to operate for the best interest of the federal or private owner. They can, however, be made to render efficient service as the allies of the owner in an aggressive warfare against renewed attacks and the maintenance of conditions which will insure future protection of the living timber.

It is through a knowledge of the habits and seasonable history of the various species of depredating insects, and the various complex factors operating for and against

them, that forest entomologists are enabled to advise methods of procedure in practical control operations either to reduce or eliminate the favorable conditions for the multiplication of the beetles or to promote and utilize the factors that are unfavorable for their existence.

It is also through a knowledge of the characteristic evidence of their presence in the living and dying trees that we are enabled to give instructions to an experienced timber cruiser, forest ranger or fire patrolman which will enable him to readily detect an infestation and report upon its character and extent.

Experiments with and demonstrations of methods of control have furnished up-to-date information on the essential requirements in conducting active control operations, which enables us to advise the most economical and effectual methods to be adopted for each species of beetle, each species of tree, and each locality where infestation prevails.

Therefore, if the symptoms are accurately described and information is furnished as to the local facilities for utilizing the infested timber or for treatment at direct expense, specific recommendations for successful control can be made without an examination by an expert.

The presence in any national park of quantities of dying pine, spruce or Douglas fir that has not been caused by recent fires is evidence of the presence and destructive work of one or more species of *Dendroctonus* beetles. An examination of the bark of the main trunks of some of the dying

trees will usually furnish conclusive evidence, for if the trees are infested the characteristic work in the bark, as illustrated in the bulletins of the Bureau of Entomology, will be easily recognized.

The next thing to do is to determine the extent of the infestation, the kind of trees involved, and the facilities for disposing of the timber by sale, free use, or direct expense. Then the superintendent should report the facts to an expert and ask for advice and recommendations. If he will then proceed without delay to dispose of the infestation according to instructions given him, success in checking or completely controlling the pest is almost certain to follow.

If upon locating an infested area, it is found to extend beyond park boundary into adjacent privately owned timber or the national forests, co-operation or at least concerted action is required, because an important center of infestation is a menace to the living timber within a radius of ten to twenty miles.

If the timber of a national park is healthy, and centers of infestation are found in adjacent forests within a radius of ten to twenty miles, the park superintendent should notify the owners. If, for any reason, the owners cannot dispose of the infestation, the park officials should help to do it just as they would help in fighting a fire that was threatening the

park. In a like manner the federal and private owners of healthy timber adjacent to a park should help dispose of any extensive infestation in the park, because it may be more of a common menace than a forest fire.

If this policy of co-operation for the general good is adopted, and the essential requirements for successful control are strictly adhered to for a few years by the officials of the national parks, the national forests, and the principal private owners, the damage to living timber on the parks and adjacent lands will be reduced to a minimum, and ultimately thousands of dollars in commercial and æsthetic values will be saved for every dollar of public or private money expended.

TWO IMPORTANT CEMETERY TAX CASES

The question of cemetery taxation has come strongly to the front in recent years in attempts in several states to levy various forms of taxes for local improvements against cemetery organizations.

In two of the most important suits of this nature recently decided cemeteries have been declared not subject to taxation. The Court of Appeals of Kentucky has recently handed down a decision declaring Cave Hill Cemetery not liable for street improvements, and Mt. St. Mary's Cemetery in Kansas City, Mo., has recently won a legal contest to tax it for sewer tax bill.

The opinion of Chief Justice Hobson in the Kentucky case (156 Ky., p. 599) is as follows:

George W. Gosnell received an apportionment warrant from the city of Louisville against the property of the Cave Hill Cemetery Company for paving with brick a portion of the carriage way of Payne street. The amount of the warrant was \$1,115.49. He brought this suit against the Cemetery Company to subject the abutting land to its payment. The Cemetery Company answered in substance that it was a quasi public corporation without stockholders, empowered to conduct a cemetery, not held for private or corporate profit; that all of its lands and property were held and used under perpetual trust for cemetery purposes; that a part of the property sought to be subjected was occupied by the United States National Cemetery; that the enforcement of the lien would be a violation of the general statutes of the state and the acts of Congress prohibiting the violation of graveyards; that by an act of March 9, 1854, it was provided that the corporation might acquire by gift devise or purchase not exceeding 300 acres of land and that all lands acquired by it should be perpetually held and used for the purposes of a rural cemetery; that by an amendment to this act, it was authorized to sell to purchasers burial lots and issue to them certificates vesting in them the right to use the lots as a burial place for the dead, but not to be subject to execution or in any manner liable for the debts of the purchaser; that all the lands in the cemetery grounds should be forever exempt from taxation; that one or more soldiers of the United States were buried on the land set apart to the United States National Cemetery; that the land sought to be subjected lies wholly within the grounds of the cemetery which under the charter and deed from the city of Louisville is to be perpetually held and used for a cemetery; that the grounds are enclosed by a permanent wall 13 inches thick and 9 feet high made of vitrified brick laid in cement; that the land sought to be subjected has been graded and prepared for use as burial lots; that shrubbery, trees and ornamental plants have been set out and are growing thereon; that some graves are upon the land, and that the land cannot

be lawfully used or occupied by a purchaser without injuring the wall enclosing the cemetery or interfering with or mutilating the grave or graves and gravestones included in it, or without destroying the only entrance to the cemetery from Payne street; that over 43,000 of the dead are buried in the cemetery, and that an entrance into it from Payne street is necessary for the proper use and maintenance of the cemetery; that by reason of the premises, the city had no power to make the cost of the improvement of Payne street a charge upon the abutting property used as a cemetery or to subject the property, or any part thereof, to sale. The plaintiff demurred to the answer. The circuit court overruled the demurrer to the answer, but intimated that though the land could not be subjected the cemetery company might be required to pay the apportionment warrant. There was an issue between the parties as to how much of the cost of building the street should be apportioned to the Cemetery Company, but this was settled by an agreed order by which Gosnell recovered of the city of Louisville \$595.32; and it was agreed that the balance of the warrant, to-wit: \$520.17, was the correct proportion of the contract price which should be calculated against the land of the Cave Hill Cemetery Company; but it was stipulated that this judgment should not operate or be construed in any way as an admission by the company that it or its land or its funds were in any manner liable for the balance of the apportionment warrant. The plaintiff filed an amended petition in which he alleged that the Cemetery Company had funds on hand more than sufficient to pay the claim. The Cemetery Company demurred to the amended petition; its demurrer was overruled. It then filed an answer in which it alleged that it was engaged in the improvement and ornamentation of the cemetery, and that it received money from the sale of burial lots, also money from lot owners, to be used exclusively in the annual care of their respective lots and graves; that its revenues were sufficient to satisfy its running expenses only by economy and that all the money it received was dedicated to the care and upkeep and beautifying of the cemetery. The circuit court sustained a demurrer to its answer and entered a judgment whereby he adjudged the plaintiff a lien on the property of the cemetery for \$520.17, with interest and cost, excepting out of the judgment the land conveyed to the United States National Cemetery. It was further adjudged that it appearing to the court that the lot of land against which the lien was adjudged is enclosed as part of a burial ground of the dead, the same should not be sold by the Commissioner at public sale; but that it appearing that the Cemetery Company had more than sufficient funds accumulated as a surplus, it was adjudged that it within 20 days pay into court a sum of money sufficient to satisfy the decree. The Cemetery Company appeals.

In Louisville vs. Nevin, 10 Bush, 549, suit was brought to subject the land of a cemetery to a street assessment. Refusing to subject the property, the court said:

"The chancellor will not decree that to be sold which cannot lawfully be used for the ordinary purposes to which property of a like character is commonly applied, and especially when there is no imaginable beneficial use to which it can be

put by the purchaser which would not subject him to punishment under the penal statutes of the states. Section 26, Article 17, Chapter 29, of the General Statutes reads as follows:

"Any person who shall wilfully mutilate the graves, monuments, fences, shrubbery, ornaments, grounds, or buildings in or inclosing any cemetery or place of sepulchre; or shall violate the grave of any person by wilfully destroying, removing, or injuring the head or footstone, or the tomb over or the inclosure protecting any grave, or by digging into or plowing over or removing any ornament, shrubbery, or flower placed upon any grave or lot, shall be fined not less than ten nor more than one hundred dollars or imprisonment not exceeding six months, or both, as a jury may determine.

"If the lot in question was sold, the purchaser could not use it for any of the purposes for which town-lots are ordinarily used without subjecting himself to the penalties denounced by the foregoing statute and making the court a particeps criminis in his offense. If it be said that the purchaser must take care of himself, it will be sufficient answer that the court ought not to offer that for sale which it will not allow to be used by the purchaser for any purpose that can be of the slightest value to him. The city had complete authority to contract for the work but had no authority to make it a charge on the abutting property, and is therefore liable to the contractor for the price of his work. (Murphy vs. City of Louisville, 9 Bush, 189)."

The statute quoted is still in force and is now Section 1336 Kentucky Statutes. In that case it appeared that the lot was filled with graves and that the trustee had not funds in his hands belonging to the trust with which to pay the assessment. It does not appear here that the lot sought to be subjected is filled with graves; but we do not regard this as material, for the reason that the statute protects the monuments, fences, shrubbery and ornaments no less than the graves; and the purchaser would be liable for the same penalties if he disturbed these as he would be if he disturbed a grave. The purpose of the statute is to protect the cemetery and not merely the graves in it. The question came before this court again in Colston vs. Eastern Cemetery Co., 12 R. 762. In that case, the Cemetery Company was incorporated in the year 1854, and by its charter was exempt from sale for any cause under an execution or decree, but by an act of March 24, 1882, cemetery property was made liable for assessment for a street improvement in Louisville. This court adhered to the conclusion reached in Louisville vs. Nevin, and held the amendatory statute not operative as the charter of the corporation was granted before the act of 1856. It concluded its opinion with these words:

"It must be conceded that in a large city like Louisville, the existence of burial grounds become a matter of necessity and if not placed under corporate control, where money may be invested and donated for the purchase and improvement of grounds to be used for cemeteries, the expense for such a purpose would be a public burden, and hence the state is, or should always be, ready to encourage the creation of such corporations, not only to lessen the rate of taxation, but to invest the corporate body with the power to

raise such funds as will enable them to beautify and ornament the homes of the dead. This was the object of the charter creating this cemetery, where is found, from the testimony, at the time this action was instituted, nearly 40,000 graves, and no Chancellor should authorize the tax gatherer to invade this territory of the dead to enforce the collection of any assessment made by a state, county or municipality, or take from the faithful trustee the funds set apart from the sale of lots and apply them to such a purpose, when, by the terms of the charter, the land itself is exempt from execution." Under these decisions the land of the Cemetery Company in question cannot be subjected to the apportionment warrant, and is not subject to a lien therefor; for under the construction of the statutes there adopted, Section 1336 Kentucky Statutes must be held as creating an exception out of the statutes giving a lien for street improvements. It cannot be presumed that the Legislature intended to create a lien upon property when it declared it unlawful to enter upon it or to disturb it in any way. To hold that the purchaser would violate Section 1336 if he took possession of the property, is necessarily to hold that the Legislature did not intend to create a lien upon it; for it cannot be presumed that it intended a vain thing. The effect of these decisions is that Section 1336 Ky. St., is to be read into the statutes creating the lien on the abutting property; and when it is so read it necessarily excepts cemetery property out of their operation. If the section of the statute giving the lien had contained as a proviso the words contained in Section 1336, this would admittedly be their effect, and the result is the same when by judicial construction they are to be read into it or as qualifying it. The Legislature, since these decisions were rendered, has acquiesced in this construction. There is no statute now in force giving the city a right to subject cemetery property, the amendatory act above referred to, not having been brought over into the present statutes. The construction of the statute having been acquiesced in by the Legislature, cannot now be disturbed.

It remains to determine if the funds in the hands of the Cemetery Company may be subjected. To require the Cemetery Company to pay the apportionment warrant when its land is not subject to a lien would be in effect to make the owner of the property personally liable for the amount sued for. But we have often held that the owner is not personally liable for the cost of a street improvement. (*Orth vs. Park*, 117 Ky. 791; *Long vs. Barbour Asphalt Co.*, 151 Ky. 1, and cases cited). To require the Cemetery Company to pay the money into court is only in another form to subject its property to the lien. All the funds in the hands of the Cemetery Company are held under a trust to maintain the cemetery, and to require these funds to be paid out for other purposes is to require the trustee to divert the funds from the trust to which they are dedicated.

In *Row and Lyons vs. Seaulon*, 98 Ky. 25, a county was indebted to a contractor for the construction of a courthouse, and had set apart a fund for the payment of the debt. Mechanics and material men having claims against the contractor for labor done and material furnished in the erection of the building, had given the notice required by the statute, and it was held that they thus acquired a lien upon the fund, although the lien could not be enforced against the courthouse. The same rule upon like facts was applied in *Noonan vs. Hastings*, 101 Ky. 313; *Allen Co. vs. Fidelity and Guaranty Co.*, 122 Ky. 833. But these cases have no application here. The county had contracted for the building of the courthouse and had set aside the fund to pay for it. The fund so set aside represented the building, and in giving the laborers and material men a lien upon the fund, no part of it was diverted from the purpose for which it was dedicated. But here the Cemetery Company has made no contract; it holds the funds in its hands dedicated to other purposes; and these funds do not represent in any way the lots sought to be subjected and have no connection therewith. In those cases there was a personal liability for the price of the building; here there is no personal liability.

It is a sound public policy to protect the burying place of the dead. Families scatter; family burying grounds sooner or later fall into decay, and experience has shown that the only way to protect permanently burying grounds is to have some organization similar to appellant. The purchasers of lots in the cemetery bought them and paid for them under a contract that the money they so paid should be used in protecting, keeping up, and ornamenting the cemetery. This constituted

a large part of the consideration. To require this money now to be paid out for other purposes would be to divert the trust fund from the purposes to which it was dedicated and to impair the obligation of the contract. This cannot be done.

We do not see therefore that either the land may be subjected to the claim or that the Cemetery Company may properly be required to pay it out of the funds in its hands.

Judgment reversed and cause remanded for a judgment as above indicated.

In the Kansas City case the suit of *W. C. Mullin vs. St. Mary's Cemetery Association*, in the Circuit Court of Jackson County, Mo., was commenced July 24, 1907, upon special tax bills issued some three or four years prior to that date, in the sum of \$19,031.

These tax bills were part of tax bills issued for the construction of sewers in the southeastern part of Kansas City, Mo.

Mt. St. Mary's Cemetery Association owns Mt. St. Mary's Cemetery, a 35-acre tract of ground, in one of the sewer districts. The plaintiff in this suit originally sought an alternative judgment in his petition. He asked that the tax bills be declared a lien upon the cemetery land and that this land be sold upon execution, and if the court should hold that the cemetery tract was not subject to sale upon execution, he prayed that, in that event, the court permit an execution to issue against any other property or money of the cemetery association or that a receiver be appointed for the association until such time as the revenue should liquidate the tax bills. The defendant filed a general demurrer to the plaintiff's petition and contended that under the statutes of the state of Missouri the cemetery was exempt from execution sale.

Upon the first trial in the Circuit Court this demurrer was sustained, and the tax bills declared void. The plaintiff appealed to the Supreme Court of the State of Missouri, and this court, in November, 1911, handed down an opinion in which the defendant's contention that no general judgment could be issued against the cemetery association was sustained, and the defendant's contention that the cemetery tract was not subject upon execution was overruled.

In the opinion rendered by the Supreme Court it maintained that exemption from sale on execution under statutes did not mean exemption from sale upon a special execution such as would be issued to enforce the lien of a tax bill.

The state of New York has a statute exempting cemetery land from execution, of which the Missouri statute is a copy. The courts of New York have decided flatly that under this statute special tax bills against cemetery land are void. These New York cases construing the New York law were cited to the Missouri Supreme Court, but the court did not see fit to adopt the construction of the New York courts in this case.

Upon a new trial in the Circuit Court the cemetery association made two additional defenses. Its first defense was that

the enforcement of these tax bills would result in the confiscation of the defendant's property and violated the constitutional provision that private property should not be taken for public use without just compensation or without due process of law. The defendant contended that the enforcement of these tax bills and the sale of the property to pay them would simply be a condemnation of the property for public use under the guise of taxation. The defendant further contended that as the city charter of Kansas City required tax bills to be issued against all the lots of land in the district separately, these tax bills, which covered the whole cemetery, embracing the lots and tracts owned by several individual owners, were in direct violation of the charter and were consequently void.

The Circuit Court, upon a second trial, did not decide the constitutional question, but held that the defendant's contention that these tax bills covering the whole cemetery were void as being in violation of the city charter, and for the further reason that their enforcement would result in the imposing upon the part of the cemetery remaining unsold a tax which should properly be borne by the cemetery association and by the owners of the various lots.

The plaintiff in this case has filed an affidavit and bond for appeal and proposes to try the case again in the Supreme Court of Missouri.

Counsel for the cemetery association are of the opinion that the ruling of the Supreme Court of Missouri, when it ruled that the statutes of Missouri exempting burial grounds from sale upon execution, did not forbid the sale of this class of property to pay tax bills, is not good law, and that, upon another hearing, the decision as it now stands would be overruled or modified. In many of the states of the Union courts have refused to permit the sale of cemeteries on the ground that it was against public policy and public decency. In Nebraska the court said that the law will not permit litigants to engage in an unseemly struggle for the few feet of Mother Earth that is necessary to enfold the last that is mortal of man. In this *Cullins* case, the tax bills were issued for sanitary sewers and the cemetery land was taxed at the same rate per square foot as lots containing dwellings, stores, barns, etc. Of course, the cemetery needed only ordinary tile drains, and the injustice of an attempt to saddle upon it something in no event beneficial to it is apparent.

The tax bills upon which Mullins brought suit bear interest at 7 per cent per annum, with an additional 3 per cent per annum penalty for non-payment when due. The sum now claimed on these tax bills is nearly \$40,000, with a similar amount on dormant suits pending the outcome of this one.

PARK ROAD CONSTRUCTION IN INDIANAPOLIS

The boulevard and road building carried out and under way in the Indianapolis park system includes some of the most interesting construction of this character in the country. All of the city streams have cramped, narrow channels, and many acres of contiguous land have been continually subject to overflow in times of high water. The contemplated improvement widens and deepens the channel and thus provides material for building boulevard embankment. These boulevards are purposely built with long, easy curves and are drawn away from the thread of the stream, thus providing natural parks along both sides of the streams along the entire course, which are available for breathing spots and playgrounds.

The roadway known as the Myers road will be a bituminous macadam twelve inches deep and thirty feet wide, with a thirty-five-foot lawn space on the west side and a fifteen-foot lawn space on the east side. This will make an excellent border drive and one which will be adapted to both pleasure driving and heavy traffic.

The Crawfordsville road between Indiana avenue and the Emrichsville bridge was improved with a twelve-inch bituminous macadam roadway over a twenty-foot width at a total cost of twenty thousand dollars. This improvement was ordered by the Board of Public Works and ten thousand dollars appropriated by the City Council. This sum was found to be inadequate and an increase of five feet in width and a bituminous surfacing was furnished by the Board of Park Commissioners. About one hundred tons of Binder C was purchased of the Standard Oil Company and twenty tons of Sarco from the Standard Rubber and Asphalt Company for binding the surface.

The improvement of Thirty-eighth street, between Northwestern avenue and Capitol avenue known as "Maple Road" including pavement, curbs and gutters, drains and lawns was satisfactorily completed and opened for traffic. This is an excellent water-bound, twelve-inch macadam with an oil surface treatment and is very satisfactory as a roadway. The roadway is the ordinary water-bound macadam with a surface treatment of a heavy residuum oil spread in two applications, the first having a specific gravity of about ninety-two and the last about ninety-six. This improvement is one hundred feet in width, having a forty-foot roadway and a thirty-foot lawn space on each side.

The following copy of the specifications in detail for the building of the Crawfordsville and the Meyers roads, will be of interest to road builders:

The embankment in the low ground will be built up to dimensions shown on plans, profiles and cross-sections; the material for this work shall be obtained from points along the line of the improvement where cuts are necessary to



Preparing.
Subgrade.

Stone in Place.



Completed.

CRAWFORDSVILLE ROAD IMPROVEMENT, INDIANAPOLIS.

bring the lawns and roadway to grade shown on profiles. In the construction of the embankment only good top soil or clean clay earth shall be deposited in the lawn spaces or slopes for a depth of two feet below the surface; all sand, gravel and other material not suitable for lawns shall be deposited in base of embankment or in roadway space below line of sub-grade.

SUB-GRADE—The surface of the roadway within the limits above described shall be excavated to a proper depth, rolled and compacted with a steam roller weighing not less than ten (10) tons, and when thoroughly compacted to the satisfaction of the Board of Park Commissioners, shall be left true to sub-grade, which will be twelve (12) inches below and parallel to the established cross-section of the roadway as shown on the plans.

Any soft and spongy ground shall be removed and such excavation and other depressions that may appear shall be filled with dry earth or broken stone, and rolled until the whole surface is firm and solid, as the Board of Park Commissioners may direct.

BOTTOM COURSE—On the sub-grade prepared in

the manner above described, shall be spread a layer of broken limestone, which, when thoroughly compacted by rolling to the satisfaction of the Board of Park Commissioners, shall be seven (7) inches in depth.

The stone in this layer shall be good sound limestone, practically uniform in quality and as near an approach to a cubic as possible, and broken so that the greatest dimension shall not exceed three and one-half ($3\frac{1}{2}$) inches, and shall be not less than two (2) inches, free from dust, dirt and screenings, and all stones that are wedge-shaped and do not approach uniformity of measurement on their side, shall be taken from the road-bed and no stones allowed to remain which are not sound, strong and equable in size and quality of material. This layer shall be thoroughly compacted by rolling and should any unevenness or depressions appear, they shall be filled with broken stone and re-rolled, and this process repeated until a firm, thoroughly compact, even surface is obtained that is five (5) inches below and parallel to the established finished surface cross-section of the pavement as shown on plans and detail drawings.

TOP COURSE—Upon the above described foundation shall be placed a layer of broken limestone of the same quality as that above described and of sufficient depth to bring this layer to a uniform finish, free from irregularities and depressions to the established cross-section as shown upon the plan for said improvement heretofore approved by the Board of Park Commissioners. The stone in this layer shall be broken so that the greatest

surface upon all parts of the roadway. The limestone screenings shall be clean and free from all clay, dirt or other foreign matter, and of such size and quality as shall be acceptable to the Board of Park Commissioners.

DRESSING—The surface of this top layer shall then be brushed clean of all dust, dirt or loose particles of macadam, and then receive an application of a clean petroleum residuum which shall

Fabr., and shall be homogeneous and shall show no coarse crystals.

REFINED ASPHALT—The refined asphalt to be used shall be derived by either of the following methods:

1. By heating, if requiring refinement, crude, natural, solid asphalt, to a temperature of not over 400 degrees Fahr. until all the water had been driven off. Crude, natural, solid asphalt shall be construed to mean any natural mineral bitumen, either pure or mixed with foreign matter, from which, through natural causes in the process of time the light oils have been driven off until it has a consistency harder than 100 penetration at 77 degrees Fahr. At least 98½ per cent of the contained bitumen in the refined asphalt which is soluble in cold carbon disulphide, shall be soluble in cold carbon tetrachloride. Such asphalt must melt readily upon the application of heat. In no case shall it be prepared at the refinery with any product not hereinafter provided for.

2. By the careful distillation of asphaltic petroleum until the resulting residue has a consistency of from 30 to 45 degrees penetration at 77 degrees Fahr.

a. The solid residue so obtained shall be soluble in carbon tetrachloride to the extent of 98½ per cent.

b. Its bitumen shall yield upon ignition not more than 13 per cent of fixed carbon.

c. When 20 grams of the material are heated for five hours at a temperature of 325 degrees Fahr. in a tin box 3½ inches in diameter, after the manner officially prescribed, it shall not lose over 5 per cent by weight nor shall the penetration at 77 degrees Fahr. after such heating be less than one-half of the original penetration.

d. A briquette of the solid residue having a cross section of one square centimeter shall have a ductility of not less than 30 centimeters at 77 degrees Fahr.

The oil and asphalt of the kinds and in the proportions above specified shall be thoroughly mixed together and applied to the road at a temperature of not less than 280 degrees Fahr., and in sufficient quantities to cover all parts of the pavement and until the oil and asphalt mixture appears and remains on the surface of the road, which will require at least 1½ gallons to each square yard of pavement. The oil and asphalt dressing must be applied evenly and uniformly over the entire surface of the pavement, and in a manner acceptable to the Board of Park Commissioners.

After the application of the oil and asphalt the surface of roadway shall then be covered with a sufficient quantity of clean limestone screenings ¼ inch to ½ inch, free from dust, to absorb all excess oil and to completely fill all interstices, and shall then be rolled to the satisfaction of the Board of Park Commissioners and until it is compact and solid and ceases to creep under the action of the roller. The limestone screenings shall be clean and free from all clay, dirt or other foreign matter, and of such size and quality as shall be acceptable to the Board of Park Commissioners, and shall be cast on the surface of the pavement from the sides of the roadway.

In all the above layers of courses the depressions must be filled and all defects in grade or cross-section shall be corrected as the rolling progresses.

All of the material used in doing the work provided in this contract and the manner of doing the work thereunder shall be subject to the approval or rejection of the Board of Park Commissioners.

The contractor shall designate the kinds of asphalt and oil he proposes to use; and shall submit samples to the Engineer that the same may be tested before the material is delivered on the work.

ROLLING—All the rolling above specified shall be done with a steam road roller weighing not less than ten (10) tons.

GRADING LAWNS—The lawns shall be graded to conform with the roadway and curb according to the general cross-section of the work as shown on drawings, and dressed with fine earth; the gutters shall be carefully shaped according to the general cross-section and sodded with clean blue grass sod, to width shown, properly tamped or rolled. In constructing lawns the coarser material shall be deposited in the embankment as above stated under heading "Embankment." No gravel or sand will be allowed to remain on surface, and in the case of cuts should gravel, sand or stony earth appear at the elevation for the surface of the lawns, the contractor shall be required to remove such sand, gravel or earth to any depth not greater than two (2) feet below surface, which the Board may deem necessary, and refill to proper grade



BEFORE AND AFTER PARKING 38TH ST.—MAPLE ROAD, INDIANAPOLIS.

dimension shall not exceed two and one-half (2½) inches and shall not be less than one and one-quarter (1¼) inches, and of this material from sixty (60) to seventy-five (75) per cent, shall not be more than two and one-half (2½) inches in its greatest dimension, and its least dimension shall be not less than two (2) inches. This layer shall be thoroughly compacted by rolling and all defects corrected before spreading any limestone screenings upon the same.

There shall then be cast upon this layer from the sides of the roadway a sufficient quantity of clean limestone screenings to completely fill all interstices. This layer shall then be doctored and rolled to the satisfaction of the Board of Park Commissioners and until it is compact and solid and ceases to creep under the action of the roller, and until the screenings and water flush to the

have a specific gravity of from 90 to 91, which shall thoroughly cover the surface of the roadway to the satisfaction of the Board of Park Commissioners.

Upon the drying in of this application of oil, there shall be applied upon this surface a dressing of oil and refined asphalt. This mixture shall consist of 70 per cent oil and 30 per cent refined asphalt, which shall each respectively conform to the specifications which follow:

OIL—The oil shall be a semi-asphaltic residuum, which shall have a specific gravity of 94/100 to 98/100 at 77 degrees Fahr. It shall not flash below 350 degrees Fahr. when tested in the New York State closed oil tester, and shall not volatilize more than 5 per cent of material when heated five hours at 325 degrees Fahr. in a tin box 2½ feet in diameter, as officially prescribed. The residue, after heating, shall flow at 77 degrees

with solid suitable for lawns, all surplus earth taken from excavations along the line of improvement shall be deposited near Crooked Creek in Riverside Park, where directed by the Board of Park Commissioners, but not to exceed six hundred (600) feet distant, measured to the nearest point from berm line of embankment; for which the contractor shall receive no compensation additional to the price per lineal foot of roadway as herein-after provided.

DRAINS AND INLETS—One thousand six hundred and fifty (1,650) lineal feet of 10-inch vitrified pipe will be laid where shown on plans and to

grades shown on profile; the pipe shall be laid to a uniform grade and the joints well cemented with cement mortar. The pipe shall be carefully packed or rammed under and around. The trenches, when backfilled to an elevation of 2 feet below the surface, shall be thoroughly flooded and sufficient time for settlement shall be given, and refilling shall be done when necessary to bring the work to proper grade.

INLETS—Inlets must be constructed where shown on plans; they must be built according to detail drawings, and connected with 12-inch vitrified pipe as shown. All inlets shall be of an approved

pattern. The face or open side shall be twelve (12) inches in depth and the weight of inlet shall be not less than three hundred (300) pounds; cover shall weigh fifty (50) pounds.

BIDS—The bidder in submitting his proposal must state the price per lineal foot of the improvement, including all items, and for all work completed according to plans and specifications and no quantities will be allowed for, and no allowance will be made for any labor or material necessary for the full completion of the work provided for in the plans, profiles or specifications, except for the bid price per lineal foot.

HARDIER EVERGREENS FOR THE NORTHWEST

By CLARENCE WEDGE.

In the states that form the northern frontier of our country the coniferous family of trees are peculiarly useful and necessary to the comfort of both animals and men. The fact that they are so commonly found in their forests would appear to indicate that a beneficent Providence had planned them to meet the needs of their inhabitants. Even in the places that are now bare there are indications that in former times they were well covered with coniferous forests, and if the fires that for ages have devastated our western prairies had been kept out they would now no doubt be covered with forests of pine and fir.

As important and necessary as evergreens are generally allowed to be, and as easy as they have been to obtain, comparatively few have been planted during the years that have elapsed since the settlement of the country. The less useful deciduous trees have up to this time almost monopolized the attention of our planters and only in occasional places have the more useful evergreens been given their full opportunity. I think that this state of things is largely due to the fact that we have so far taken our evergreens from regions where the climate is very different from our own. So that in transplanting to our soil they have been given new hardships to endure for which they have been in no wise prepared. So far the evergreens that have been commonly planted with us have come from three sources. The western coast of Europe, the forests of the states bordering on the Great Lakes, and from the Rocky Mountains. The European evergreens, the Norway spruce and Scotch pine, while derived from higher latitudes than that in which we live have been used to the moist, cool atmosphere of coast regions and when planted in our dryer air, frequently brown and take on a sickly appearance. The evergreens of Northern Minnesota, Wisconsin, and Michigan, the white spruce, balsam fir, and white pine have been accustomed for many generations to moist soils and the shelter of deciduous trees, and when put out in the open exposure in the dry air and soil of Western Minnesota and the Dakotas, lose the beauty and thrift that they show in their native forests. It is only in comparatively recent years that the evergreens of

the Rocky Mountains have been planted in Minnesota, but they made it evident at once that they belonged to a more rugged and sturdier race and that a dry soil and exposed location would not interfere with their health and thrift. But unfortunately for our state the seed collectors have almost altogether been at work in Colorado, full six degrees of latitude south of us, and in our severer winters some species like the Ponderosa pine and Douglas fir clearly show that they have been transplanted too far north of their native habitat, the pine coming out of the winter with seared foliage and the fir with injured twigs.

For many years I have been desirous of securing evergreen seed from Rocky Mountain forests on our own degree of latitude, but as there has not yet appeared any professional seed collectors in those forests, and ripening their seed as they do at a season of year when our time has been taken up with orchard work, I have never been able to secure any of this northern seed until three years ago, when, as I reported to the society, I found an interesting forest of Ponderosa pine in western North Dakota, and a year later was fortunate in being able to gather a considerable quantity of seed. Meanwhile I have been corresponding with the forest service and endeavoring to locate Douglas fir on some of the detached groups in central Montana as far as possible from the influence of the warm "chinook" kinds and the protecting influences of the main body of the Rockies. This year I was informed that there was a good crop of seed in the Big Snowy Mountains, and at the proper season I left home prepared to explore and gather anything that seemed promising for Minnesota and the Western prairies. The Big Snowy Mountains are located almost exactly in the center of Montana and attain an elevation of about eight thousand feet. They are about one hundred and fifty miles east of the main body of the Rockies, or nearly the distance across the state of Minnesota at St. Paul, and rise as a gigantic pile of earth and rock out of the midst of a vast plain. I should say that they might more properly be called a single mountain, as it does not appear to be cut in two by any dividing valley. It is splendidly timbered and where the ridges

that seam its sides extend out into the plain ever thinning ranks of trees follow their crests for miles out from the main body of timber.

Knowing the habit of the Ponderosa pine and seeing it more or less from the cars all along the way through Montana in exposed places where nothing else would grow, we were prepared to find this tree on the outskirts of the forests which covered this exposed mountain, and as we rode out from the railway station at Judith Gap and came within sight of the evergreens that reach out on the tops of the ridges that radiate from the mountain, we supposed of course that they were specimens of this hardy species. But as we came nearer to them it became evident that the trees that were venturing alone the farthest out on the prairies were of some other species and driving close up to them we were surprised and delighted to find that they were the Douglas fir, which we had scarcely hoped to find outside the sheltered valleys of the mountains. But here it was the first tree to greet me and to prove at once its ability to stand the blistering heat, the wintery winds, and the almost arctic cold of the prairies of Central Montana. And more than this they were standing on elevated ridges that appeared to be as utterly devoid of moisture as any soil that I have ever examined. I felt at once that these fine old trees, some of them two feet in diameter, with foliage as green and healthy as I have ever seen in sheltered northern forests had proved at once that the Douglas fir was a tree equal to necessities of any of our dryer northern states and might be planted with satisfaction and assurance where the box elder, ash, cottonwood, and almost any deciduous tree would fail. In all my experience on the plains I have not seen any deciduous trees standing in such locations, indeed, in this particular mountain the only deciduous trees that I found were groves and clusters of poplar. The settlers there informed me that the presence of a poplar grove always showed a moist and springy spot quite different from the average soil. Passing along the ridges up toward the mountain, we soon found Ponderosa pine and the Rocky Mountain white pine, a rather distant relative of the white pine of our northern Minnesota and Wisconsin forests,

These three species are the only trees that we found on the mountain that seemed disposed to endure open exposure, and I believe that all three of them can be made perfectly at home in all the land between St. Paul and the Mountains, and that they will be infinitely superior in every respect to any deciduous tree that can be planted, indeed that they will be par excellence the windbreak trees of the prairies and reversing the usual order of planting, these evergreens may be planted to protect the deciduous trees on the prairies rather than the deciduous trees to protect the evergreens.

For perhaps ten years past the Black Hills spruce has had a growing popularity on the western plains, and is now by many considered the hardiest and best adapted to the dry air and soil of the prairies of all

evergreens that have been planted. I was very much interested in learning through the forest ranger that this spruce, together with two or three other species, was found in this mountain. In my own explorations I frequently came upon it but always in the deep canons and valleys or more generally on the higher and cooler altitudes of the upper part of the mountain, clearly proving that it was far less adapted to open exposure and dry soil than the three species which I have before mentioned, and that if it tolerates the climate of the Dakotas, the Douglas fir may be counted on as altogether superior and able to endure hardship far better than the Black Hills spruce. It may not be generally known that the Douglas fir is also one of the more rapid growing evergreens, which

on our grounds usually keeps up with the Norway and white spruces. It has also the richest foliage of almost any conifer that has been planted. When I visited Mr. Hill's place at Dundee, Ill., well known as one of the leading evergreen specialists of the country, I found him inclined to give the Douglas fir about the highest place among the species which he had tried out in northern Illinois. We have therefore in this tree, as I think, not only an evergreen of great hardiness, valuable for planting almost anywhere for shelter, but also an ornamental tree of first quality that in our parks, lawns, and cemeteries will as time goes on and it is better known and appreciated, have the place of honor as perhaps the best all around evergreen that can be planted.

PARK PLANTING FOR PRAIRIE TOWNS

Address by Lycurgus R. Moyer, before Minnesota Horticultural Society.

The prairie village usually grows up around a railway station, the station itself, a watertank and a row of grain elevators forming the civic center, so to speak. Everything else must be created. And the people who come are poor, as the frontiersman always is. Carnegies and Rockefellerers do not start the prairie towns. Houses, stores and shops must be built, streets must be graded, sidewalks must be laid, crossings must be put in, a public water supply must be obtained, fire protection must be secured, the streets must be lighted, schools must be maintained—for the people who go to the frontier are usually young, and many children are born to them. All these things take money, and tax levies become burdensome, often as high as five and six per cent. Then there comes a demand for a high school and a public library. Perhaps there will be a call for a municipal lighting plant, with ornamental lights on Main street.

But with the coming of ornamental lights the discovery is apt to be made that the growing town is not so esthetically beautiful as it might be. The grounds near the railway station are found to be decorated with discarded farm machinery, illy kept coal sheds, disreputable lumber yards, the whole overgrown with Russian thistles, oriental mustards, French penny-cress, as well as with a choice collection of American weeds. Perhaps the streets have been "worked," but if that is the ease, the roadway is very apt to have been made much too wide, and the parking or boulevard much too narrow, and very likely the whole has become overgrown with coarse weeds or tall prairie grasses. If trees have been set along the residence streets they are apt to be box elders, that weed among trees, set much too thickly and far too close to where the sidewalk should be. If

the town-site proprietor when he laid out the town left a block marked "public square," it may have been planted orchard fashion with a collection of box elders and cottonwoods. If these trees have grown up, the square itself is a problem that the most expert landscape artist scarcely would dare to tackle. Assuming that the public square is on high, dry ground, the cottonwoods are apt to have begun to fail, while the box elders have attained their full growth and are becoming more and more decrepit from old age with each passing year. At the city dumping grounds, not far away, there is found a pile of old rusty tin cans, broken crockery, dilapidated old stoves and other cast off impedimenta of civilization that fire would not destroy.

If there be a lake or a stream near by with its fringe of trees or shrubs, the chances are that it has been used for pasture land or as sites for neglected stables, until most of its original beauty has been lost or destroyed.

The breaking plow and the fenced pasture have destroyed the original prairie flora, and along the country roads one only sees a fringe of ugly weeds. Strange, is it not, what desolation civilization leaves behind it!

Fortunate is the prairie town which does not have among its early settlers a large number of people whose only ambition is money-getting, people whose God is money. And doubly fortunate is the town that does not have a large number of croakers who object to all esthetic improvements.

But the time comes eventually when the people begin to look about them and dimly begin to realize how inexpressibly ugly their town really is. But the time of awakening is a long process, and those who begin to see are often looked upon as visionaries and fools.

Now that home rule charters are common, it is well to see that the town has a park board, say of five members, one to be appointed by the mayor each year to hold office for five years. Get a small appropriation from the council and begin work. A good place to commence is on the railway station grounds. Get that cleaned up and seeded down to grass. Good grass is the foundation of all landscape work. There is nothing better than bluegrass and clover. The clover will die out in the course of a year or two, but it takes that long for bluegrass to get started. Try to get the railway company interested; try the superintendent, the road master, the station agent. Get their consent if you cannot get their co-operation and go ahead. There are always waste places about the station grounds that may be planted. Make your plantations so that they will look well from the car windows or from the station platform. Plant large beds of peonies, beds of iris and beds of phlox in the foreground, with groups of caraganas, groups of lilacs, groups of bush honeysuckles farther back. Besides the common lilacs be sure to have the Japanese tree lilac, the *Villosa*, the *Rothmagensis*, the Charles X., the Senator Volland, and the Lady Joiceke lilacs. A clump of barberries will not be amiss, with one or two purple ones. Do not mix your planting too much. In the main make your clumps of plants and shrubs belonging to the same genus.

If the business street does not lead right down to the station, the parking of the station approaches will next demand attention. The roadways need not be more than thirty feet wide—narrower are sometimes better—and the rest of the street should be seeded down to grass and planted with trees and flowering shrubs. Besides the shrubs already spoken of, the

philadelphuses, high bush cranberries, rosa rugosas, spireas and Japanese barberries may be used. The forest trees should be American elm, green ash or hackberry. Avoid box elder and cottonwood, including its aliases, Norway poplar and Carolina poplar.

On a sixty foot residence street not more than thirty feet should be devoted to roadway. This will leave fifteen feet on each side for parking. If the sidewalk is along the lot boundaries the street trees should be set ten feet out from the street lines thirty feet apart in the row. Flowering shrubs may be set between the trees with good effect, to be removed when the permanent trees have attained some size. In many cases a narrower roadway than thirty feet is advisable. In nearly all cases roadways are too wide. The parts of the street not used for roadway and sidewalks should be seeded to bluegrass and white clover, and treated as a lawn. The narrower the roadways are the less trouble there will be from the dust raised by the prairie winds.

If there is vacant ground about the city watertank, clean it up and get it into grass. A plantation of shrubs will be in good taste about the structure itself, with perhaps a bed of perennials. If the site is less than a block of land, a border of shrubs may well be introduced on the side away from the street, making the border thicker where there are barns or outbuildings to be concealed. Perhaps there will be room for a few neat growing evergreens, such as the Colorado spruce (*Picea pungens*) or the Black Hills spruce, or for a silver foliaged tree, like the Russian olive.

The public buildings will come in for treatment. Street trees should be planted as suggested above. Walks should be laid in the direction of the heaviest travel. If the grounds are large a few evergreens of the kinds indicated should be planted toward the corners of the grounds. As a general rule, all other plantings should be toward the borders of the grounds. If there are unsightly buildings anywhere on the grounds, mask them by planting lilacs, tall caraganas and bush honeysuckles about them. If the buildings are of stone or common brick, plant *Ampelopsis Englemanni* about them and let it run up the walls. Large shrubs, such as lilacs, philadelphuses or tree caraganas might be planted at the corners of the buildings. Mask the foundations with small shrubs like the Japan barberry, or with such herbs as *Polygonum Sieboldii* or *Polygonum amplexicaule*, taking care not to obstruct the windows, for these herbs are rampant growers.

The public square will need more radical treatment, but do not make the mistake of planting it full of forest trees. Leave an open place in the center. Of course there will be the street trees outside, and perhaps a few evergreens may be introduced

towards the corners or toward the sides if there is an unpleasant view that should be cut off. The Austrian, or black, pine of Europe does well on the prairies and is the best looking hardy pine. The rock pine (*Pinus scopulorum*) from the foothills of the Rocky Mountains is very hardy, but it is too straggling in its habit to be admitted into a public square. The Mugho pine, an European shrub, may be planted and will remain a shrub for many years. One or two silvery leaved trees, like the Russian olive, may be planted in the borders, with the Japanese tree lilac, and the Manchurian lilac (*Syringa villosa*). These are all rampant growers. Smaller shrubs, such as spireas, barberries, viburnums, may be planted in front of them or alternate with them, taking care not to be too formal. The place for hardy flowers, peonies, irises, phlox, hardy chrysanthemums, etc., is toward the center of the grounds, surrounded by a well kept bluegrass sod.

If the town is in a hilly location and there are banks of raw earth anywhere to be covered, there is nothing better than lilacs to cover them. They will grow on a very steep slope if care is taken to set them in the lower angle of V-shaped ditches to lead the water that falls on the slope toward them. And when they are in bloom people will stop and wonder at their beauty.

If the town is by a lake shore or river bank, it is doubly fortunate. No time should be lost in acquiring the land there for a public park. If there is a fringe of trees on the site, it should be preserved

and treated with reverence. No landscape gardener has yet been able to rival nature in artistic planting. Do not send the street commissioner into it with his brush hook. For the most part let the underbrush grow. Open only necessary walks and drives, and do not under any circumstances fill the woodland with the works of man. If planting must be done, and often it must, do not overlook our native trees. Bur oak, American elm, cork-bark elm, red elm, green ash, hackberry, basswood, iron-wood, coffee-tree, walnut, butternut, bitternut, silver maple, willows and cottonwoods will all have an appropriate place. The willows and cottonwoods will be at home near the water. The basswoods and maple are well adapted to rich ravines. The iron-wood will thrive on the north slope of hills. The hackberry is adapted to bench lands, while the green ash and the bur oak will grow anywhere. The borders of woodlands should be set with native shrubs, such as our beautiful hawthorns, blackhaw, wahoo, high bush cranberry, red-berried elder, sumac, gooseberry, wild currant, the woodland, or red twigged, rose, cornel and the shrubby upland willows. The only evergreen native to the prairies is the Virginia juniper; but the Black Hills spruce and the Colorado spruce are hardy, and among the hardy pines we have the black pine of Europe, the Scotch pine, and the rock pine (*Pinus scopulorum*) from the Black Hills and from the Rocky Mountains. A park is for rest and quiet. It should be crowning work of our efforts to get back to nature. Do not spoil it with carpet bedding, band stands, or other obtrusive work of man.

ASKED AND ANSWERED

An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

More About Mausoleum Construction.

The questions asked by A. B. N. in your November issue and the answers thereto have attracted the attention of the writer.

The building of a mausoleum is not a serious problem to the average man. At least, he does not so consider it. The glib-tongued salesman frankly assures his customer that the building will stand for all time. He has regard for only one thing, "Kill the order."

There are certain fundamental principles involved in the construction of a stone building that is never heated on the inside that are absolutely essential to the stability of the building. Most of these have been known for years, some of them for ages. Yet you will find them violated repeatedly by those who are known as the best mausoleum builders in the country. Why? Nothing more or less than the "Kill the order" spirit, as far as my observations go.

How many sets of plans would be drawn as they are if the builder had to give a guarantee that the building would stand for 1,000 years and it were possible that

he had his lease of life extended so that he would be responsible for it? A great many will say 1,000 years is out of the question. Decidedly not; it ought to be only a beginning for our hardest granites.

To get back to the subject. The questions asked by A. B. N. constitute only minor problems in mausoleum construction. It matters little whether the caskets are wood or metal, whether the crypts are drained or ventilated, if the whole exterior of the building goes to pieces in a short time.

By asking the questions he clearly indicates that he is a beginner. The only advice to give him in justice to himself, in justice to his customer and the cemetery in which the work is to be erected is this: Should he have a customer, or in the future finds one, positively do not attempt the plans of even a simple building. Get the best monumental architect he can find; not merely a designer, but someone who thoroughly understands construction and one whose conscience has not for years been a captive of the "kill the order" spirit.

Regarding the statements of Mr. Currie in reference to ventilation, also his reference to the discussion at the meeting of the A. A. C. S. With all due regards to Mr. Currie and the architects involved in the cases cited, the conclusions are wrong. The authorities quoted in the discussion may be such and unquestioned for building construction. The fact that any such trouble arose as stated shows their utter lack of knowledge in mausoleum work. You can point out as a failure practically every mausoleum designed by a "building" architect unless he has called into consultation a good "monumental" architect.

Mr. Currie in his observations has not arrived at the true principles involved and has drawn conclusions that will not hold good unless he can keep the air in his building perfectly dry. This is, of course, a practical impossibility. Under ideal condensing conditions let him observe that moisture will condense on certain portions of the interior of a building of ordinary construction, while other parts will be dry. Should he be able to locate such a case and then get at the true reason for such phenomena, we venture to say he will change his mind.

It is not so much a question of absolutely preventing condensation as drying up what moisture does condense quickly and reducing condensation to a minimum. Dead air spaces most assuredly will not do it. The closing up of the building and never changing the air, or only at long intervals, has a tendency in our city (Pittsburgh) to produce stalactites and stalagmites the same as any cave. It will also cause hard granite to deteriorate.

R. L. B.

Motor Trucks in the Cemetery.

Editor Asked and Answered: I would like to obtain all the information possible as to use (actual experience) of motor trucks in the cemetery. Can you refer me to any cemetery now using same? We are contemplating installing same in our cemetery to take the place of carts and would like all the information on this subject possible.

The last article on this subject in your PARK AND CEMETERY was in the September number of 1911, by Edward G. Carter. Would like more information on the construction of trailers in this connection. Can you give the cemetery people something on this subject?—M. J., Cal.

We do not use motor trucks and trailers. We could not use them on our hills or dumps. I have not heard of anyone else but Mr. Carter, at Oakwoods, Chicago, who does. I think they are a good thing for a cemetery like Oakwoods, but for a place like ours they could not be used, for the reason that our dumps are over embankments and could not get the trailers close enough to dump. We have trouble enough with the men backing horses and

carts over the fills, so I do not know what would happen with a motor truck.

GEO. M. PAINTER,
Supt., Westminster Cemetery.
Philadelphia, Pa.

Our experience has not been very great with motor trucks. We have a self-dumping motor truck, three-ton size, and it has been in use only for about six months, but we have not satisfied ourselves entirely as to any great advantages in this outfit, and, therefore, cannot speak confidently of its success. Perhaps Greenwood Cemetery, of Brooklyn, N. Y., may be able to give you further advise. I understand they have a number of trucks in operation.

FRED R. DIERING,
Supt., Woodlawn Cemetery.
New York City.

We have at present one auto truck (1½ tons) and three auto trucks (3 tons, dump bodies) which have been in operation here for some time, proving the efficiency and economy of auto-truck service. By the use of these machines we were enabled to reduce our trucking expenses during the year 1912 about \$4,500, as these four machines replaced fifteen teams and trucks. We now have five additional motor trucks which will be delivered during the next week and which will very much increase the efficiency of our service and dispense entirely with the use of horses in this department. It is my opinion that the trailer service is not of any advantage or economy unless loads of five or six tons and over are to be hauled. The operating expense of a three-ton truck, including chauffeur, fuel, repairs, insurance, depreciation, etc., amounts to \$9.98 per day, and one truck of this kind will perform as much work as four teams, which in this city cannot be secured for less than \$5.50 per day each, and motor trucks not in use certainly cost less to maintain than horses.

In addition to our motor trucks, we maintain three automobiles for the use of our heads of departments, and owing to the large extent of our cemetery and the vast amount of work annually required here, these machines have been of great benefit in expediting the work and increasing the supervision of labor, which is so important, as we have today over 500 men employed in this cemetery.

W. C. GRASSAU,
Brooklyn, N. Y. Supt. Greenwood Cemetery.

Inexpensive Drinking Fountains.

Editor PARK AND CEMETERY: Secretary Watrous, of the American Civil Association, suggests my writing to you for catalogues of simple, inexpensive fountains. We have made a little park in the heart of town and have a hideous and worn-out fountain to replace. As our funds are low, we thought of putting a concrete one of good lines. Will you be so good as to give us any suggestions you can?

Lock Haven, Pa. LOCK HAVEN CIVIC CLUB.

If you want something in bronze or iron

already made or made from stock designs you can probably get something very inexpensive from the J. L. Mott Iron Works, Fifth avenue and Seventeenth street, New York City. If you desire to get a concrete fountain, the cheapest way would probably be to have a local architect make you a design to meet your requirements or your individual type and have some of your local concrete workers build it under his directions.

In case you cannot find anybody to do this for you satisfactorily we can refer you to the following ornamental concrete workers from whom you can get anything in the way of fountains or park ornamental work that you might want done in concrete: Antoni Swenson, Silvis, Ill.; Peoria Truswall Mfg. Co., 812 Commercial street, Peoria, Ill.; J. C. Krause, 155 W. Thirty-second street, New York, N. Y.; Francis Howard, 5 W. Twenty-eighth street, New York, N. Y.; Emerson & Norris, 163 N. Beacon street, Brighton, Boston, Mass.; The Economy Concrete Co., New Haven, Conn.; Chas. E. Rodgers, Fall River, Mass.

Burial Vaults.

Editor Asked and Answered: How many different kinds of burial vaults are there on the market? Can cement be made waterproof; if so, how, and what does it cost? Is there a vault that lies on top of the ground? Is there an undertakers' paper, and what is the address of it?—C. W. H., Canada.

The following are the leading undertakers' journals: *Embalmer's Monthly*, Chicago; *Western Undertaker*, Chicago; *The Sunnyside*, New York; *The Casket*, Rochester, N. Y. The easiest way for you to get informed on this subject would be to get copies of the undertakers' papers, and to investigate the vaults advertised in PARK AND CEMETERY; all you have to do is to write for their literature and you will get all the information you need about any kind of burial vault you might be interested in. The Garden City Sand Co., Chamber of Commerce building, Chicago, Ill., who are specialists in waterproofing cement, write as follows:

"We are Western agents for Toch Bros.' materials and our waterproofing department is pleased to take up the question of waterproofing concrete or cement mortar by use of Toch Bros.' Toxement at the rate of two pounds of Toxement to the bag of neat Portland cement. This material does not repel water in the mix, but creates a colloid condition, thereby densifying and permanently waterproofing concrete or cement mortar. We are pleased to take up this matter with your inquirer. Kindly note that there are so many things called waterproofing in the way of fatty acids, soap and clay, calcium chloride, coal tar and soda ash, as well as hydrated lime mixtures, that we are pleased to call this to your attention, as well as for your judgment regarding inferior material."

NEW ENGLAND CEMETERY ASSOCIATION MEETS.

The New England Cemetery Association held its annual business meeting and election of officers at the Quincy House, Boston, February 9.

The following officers were elected:

President—Henry S. Adams, superintendent, Forest Hills, Jamaica Plain, Mass.
Vice-President—William Lord.

Secretary-Treasurer—Horace A. Derry, Everett, Mass.

The president appointed the following committees:

On Membership: James Warren, Jr., H. Wilson Pass.

On Auditing: Pearl J. Caldwell and G. A. Appleton.

The usual annual banquet was held after the business meeting and was much enjoyed by all.

Retiring President Edgar King made some practical recommendations in his annual address, from which we quote as follows:

I believe it has been suggested in the past, that some benefit to our association might be derived if undertakers were given the opportunity to meet with us, at some meeting to be set aside for that purpose. It might mean a getting together on some of the many vexed questions requiring a common and accepted agreement. For instance, take the Sunday funeral, the abolition of which

"except in cases of infection or contagion when burial is imperative," is so devoutly to be wished. How much better we, as superintendents, could obtain the various opinions held by undertakers in reference to this matter, if we approached the subject in a collective rather than an individual manner.

I further believe that we might, with advantage to ourselves, devise some plan by which interest in the association would become a pleasure and an instruction to the trustees of the cemeteries. To that end, I would suggest that a committee be appointed to organize and introduce some procedure having this object principally in view.

It was voted to hold the next meeting at Barre, Vt., June 16 and 17, on invitation of Superintendent Alick Hanton, of the Barre cemeteries, the Barre Board of Trade, the Barre Granite Manufacturers' Association and the Barre Quarry Owners' Association. The members will be guests of the Barre people while they are in that city and will be under no personal expense. The Barre people are making elaborate plans to entertain the members and show them the great granite quarries and manufacturing plants, where more cemetery monuments are made than anywhere else in the world. More than thirty members have already promised to go to Barre and a record attendance is expected. Further details of the meeting will be announced later.

PENNSYLVANIA CEMETERY ASSOCIATION ORGANIZED.

The organization of the Pennsylvania Cemetery Association was perfected in a good meeting, February 10, at Harrisburg, when about fifty persons interested in cemetery management gathered from all parts of the state.

The object of the association is the general improvement of cemetery conditions throughout the state, especially in smaller communities where local organization has been impracticable.

The officers elected were:

President—George M. Painter, Westminster, Philadelphia, Pa.

Vice-President—Edward Gunster, Oak Lawn, Wilkesbarre, Pa.

Secretary—William B. Jones, Highwood, Pittsburgh, Pa.

Members of the Executive Committee are: H. M. Barnes, Harrisburg, Pa.; W. H. Druckemiller, Pomfret Manor, Sunbury, Pa.; George W. German, Wildwood, Williamsport, Pa., and Robert J. Miller, Glen Dyberry, Honesdale, Pa.

The next meeting will be held in Philadelphia during the month of June, on a date to be determined by the Executive Committee.

MORE OR LESS PERSONAL.

Will H. Clark, formerly park commissioner of Oklahoma City, is now chairman of the Civic Committee of the Chamber of Commerce and organizing an energetic campaign for tree planting and city beautifying generally. Mr. Clark says in a recent introductory talk to citizens: "We must also look after the alleys, vacant lots, weeds and waste paper; see that every vacant lot not in grass or garden be utilized with some crop which will keep it green and keep down the weeds. I have been assured by the mayor that he will support us with the police department in our effort to protect our trees and lawns; in fact, each department in the city will co-operate with us. I desire also to raise a fund sufficient that we may offer rewards to tenants for the best improved and best kept tenement properties by the tenants;

nothing can get landlords and tenants closer together than this. A few sacks of flour or the like should never be offered to owners of real property as a prize to induce them to improve. Prizes to children to interest them in flowers is excellent, as has been demonstrated in our midst by the Civic Committee of the "'89rs" organization. Small prizes for adults for less display of flowers is good, but substantial prizes to land owners to improve and beautify their homes is a failure, for the few who have the wherewith to buy the labor of many men for such work are the winners, and the contest resolves itself to that class only."

Charles Coyle, secretary of the Dublin Cemeteries Committee, Dublin, Ireland, after a service of over a half century to the Dublin cemeteries, has retired on full

salary. He was a member of the Association of American Cemetery Superintendents, took the deepest interest in its welfare, and was always happy to receive any of the members who visited him in Ireland.

Otto Berger was recently appointed city sexton of Elgin, Ill., to fill vacancy made by the death of Albert Marckhoff.

At recent annual meetings of cemetery associations the following officers were elected:

Farragut Cemetery Association, Farragut, Ia.: Mrs. Thomas McMahon, president, and Mrs. G. Vansant, secretary.

Blaine Cemetery Association, Blaine, Ill.: President, J. D. Hayden; secretary, J. P. Goodall.

Fairfield Cemetery Association, Fairfield, Mich.: President, Archie Morse; sexton, V. S. Fowler.

Leland Cemetery Association, Leland, Ill.: President, C. M. Potter; secretary, J. E. Amable.

Wabash Cemetery Association, Wabash, Ind.: President, Thomas McNamee; secretary, W. Clare.

THE OBITUARY RECORD.

After a long illness, Miss Helen Frances Amrhyn, the nineteen-year-old daughter of Mr. and Mrs. Gustave X. Amrhyn, died February 15 at her parents' home, 1150 Whitney avenue, Whitneyville, Conn. The deceased's father is superintendent of parks in New Haven, and her death brings sorrow to relatives and numerous friends in the community. Miss Amrhyn is survived by her father and two sisters, the Misses Elsie and Jeanette Amrhyn.

PARK AND PLAYGROUND FENCE.

Those who are interested in the country-wide playground and recreation center movement, especially park and playground superintendents, will be attracted by the illustration of heavy iron fence and gates shown on the front cover of this issue. Approximately 100,000 feet of this fence and thirty pairs of gates have been furnished by The Stewart Iron Works Company, Cincinnati, O., to enclose Chicago Parks and Playgrounds. Some very recent playground installations are Russel Square, Ogden and Washington parks and City parks, numbers fifteen, sixteen, seventeen and eighteen. The exterior fence shown in the illustration is five feet high and made with 3/4-inch square pickets, spaced five inches on centers. The interior fence which sub-divides and encloses the boys and girls' gymnasiums, garden plots, etc., is of the same pattern as the playground enclosure proper, but made of lighter material.

A suitable enclosure is a very essential part of the equipment of every park and playground, consequently the matter of fencing should be carefully considered. No

fence is quite as suitable for this purpose as a properly designed and well constructed iron fence. Such, for instance as shown on the front cover, which has been adopted by several Chicago parks and is made by The Stewart Iron Works Co. Full specifications of this design and others equally as suitable for the purpose and as popular

SPRING WORK FOR EARTH ROADS.

It is a great mistake to put off working roads until August or September, according to road experts of the U. S. Department of Agriculture. The roads should be worked when the soil is damp so as to make the soil bake when it dries out. If the roads are worked when they are dry, it takes more power to draw the machine, and besides dry earth and dust retain moisture and quickly rut after rains. The use of clods, sods, weeds or vegetable matter in building earth roads should be avoided because they also retain moisture.

If the working of the roads is deferred until the latter part of the summer when the surface is baked dry and hard, they are not only difficult to work, but the work is unsatisfactory when done. Earth which is loose and dry will remain dusty as long as the dry weather lasts, and then turn to mud as the rains begin. By using the road machine in the spring while the soil is soft and damp, the surface is more easily shaped and soon packs down into a dry, hard crust, which is less liable to become dusty in summer and muddy in winter.

Repairs to roads should be made when needed and not once a year after crops are laid by. Because of its simplicity, efficiency, and cheapness, the split-log drag or some similar device is destined to come into more and more general use. With the drag properly built and its use well understood, the maintenance of earth and gravel roads become a simple and inexpensive matter. Care should be taken to make the log so light that one man can lift it with ease, as a light drag can be drawn by two medium sized horses and responds more readily to various methods of hitching and the shifting position of the operator than a heavier one. The best material for the drag is a dry cedar log, though elm, walnut, box elder or soft maple are excellent. Oak, hickory or ash are too heavy. The log should be from seven to ten feet long, and from eight to ten inches in diameter. It should be split carefully as near the center as possible, and the heaviest and best slab chosen for the front. When the soil is moist, but not sticky, the drag does the best work. As the soil in the field will bake if plowed wet, so the road will bake if the drag is used on it when it is wet. If the roadway is full of holes or badly rutted the drag should be used once when the road is soft and slushy.

The earth road can best be crowned and ditched with a road machine and not with picks and shovels, scoops and plows. One

with park and playground superintendents, can be had by writing to the company. Their broad experience in designing and building iron fence for parks and playgrounds throughout the country, makes their opinion and advice on the subject of fencing valuable to those contemplating this improvement.

road machine with a suitable power and operator will do the work of many men with picks and shovels, and in addition will do it better. If the road is composed of fine clay or soil it will sometimes pay to resurface it with top soil from an adjacent field, which has sand or gravel mixed with

it. This method, called the "top soil method," is now in successful use in Clarke County, Georgia.

Storm water should be disposed of quickly before it has had time to penetrate deeply into the surface of the road. This can be done by giving the road a crown or slope from the center to the sides. For an earth road which is 24 feet wide the center should be not less than 6 inches nor more than 12 inches higher than the outer edges of the shoulder. The narrow road which is high in the middle will become rutted almost as quickly as one which is too flat, for the reason that on a narrow road all the traffic is forced to use only a narrow strip.



The proposed merger of the Metropolitan Park Commission with the Metropolitan Water and Sewerage Commission was denounced by Herbert J. Kellaway, a member of the Chamber of Commerce City Planning Committee, February 2, at the first annual dinner of the Boston Society of Landscape Architects at the Harvard Club in Boston. Mr. Kellaway declared that the park commission had much more work to do by itself and the time is not now ripe for the merger. The designers of several million dollars' worth of parks, playgrounds and recreation plots were represented among the twenty-five members who gathered at the initial event of the society. Professor James Sturgis Pray, instructor of landscape architecture at Harvard, who is president of the society, was toastmaster and gave a technical talk on the subject. Arthur Shurtleff, advisor to the Boston park and recreation department, and Fletcher Steele also spoke. Mr. Kellaway, who was the principal speaker, talked to the members on "The Metropolitan Park System; Past, Present and Future." Mr. Kellaway also outlined the plans of the parkways from Columbia road to the Neponset River and from West Roxbury toward the Charles River at Watertown, which will include Hammond's Pond and Saw Mill Brook Meadows in Brookline. "When these are completed," said he, "we will have seven miles of parkways running directly across the city."

On the bluffs at Harley Park at Booneville, Mo., overlooking the Missouri River, stands an old monarch of the forest, a sassafras tree 50 feet high, 10 feet 6 inches in circumference 2 feet from the ground, and 8 feet 6 inches in circumference 7 feet from the ground, where its branches begin, and having a spread of 34 feet. Disease has fastened its hold upon it so that its heartwood has rotted away. Man, its worst enemy, has so neglected it that in a

few years the elements of nature will overcome the grand old monarch and it will return to dust. A lover of nature in that city writes us: "It is a pity that such a wonderful specimen of our native trees can't find a haven of retreat and safety in Shaw's Garden of St. Louis or some other home of nature's handiwork. This tree is perhaps the largest specimen of sassafras in existence."

C. S. Harrison, the well-known nurseryman and horticulturist of York, Neb., in commenting on the discussion of the Carolina poplar, recently appearing in these pages, writes: "Let me call your attention to the Norway poplar, which is far ahead of the Carolina. I have them growing side by side; the Norway is far more beautiful. The Carolina in this section cannot live more than 15 or 20 years. It soon gets ragged. The Norway is much harder in every way."

New Parks and Improvements.

R. H. Tacke, superintendent of parks, Lexington, Ky., has completed his plans for converting the Duncan property of 5¼ acres, well set with large trees, which was recently purchased by the city at a cost of \$26,000, into a public park and playground. The old residence will be converted into a shelter house and club rooms for the patrons of the park. Besides the usual playground arrangements there will be a sunken ball ground, four tennis courts, basketball and lawns for games. Asphalt walks will be built inside the park and concrete will be used for street pavement. Being surrounded on three sides by streets, a ligustrum regelia hedge, growing through a 40-inch wire fence, will be planted, with openings at the corners and intersecting streets.

The Park Commission of Alton, Ill., has planned a number of improvements to be carried out during the year, to cost \$9,000.



Waterproof Roads

THE problem of clean, sightly roadways in parks and cemeteries is largely a problem of providing them with waterproof surfaces. A surface of fine stone screenings is good, but it won't last under modern traffic, or under the heavy strains incident to the transportation of monuments.

A better and surer way is to bond the surface with Tarvia. Tarviated roads drain immediately and furnish clean footing for pedestrians even after a storm.

Tarviated roads do not soak up any water and accordingly are immune from damage by frost. After a hard winter tarviated roads are found practically unaffected by the season's exposure, while a plain macadam will be ruined.

We do not try to make one product satisfy all road problems, but we make Tarvia in three grades, ranging from "Tarvia X", which is very dense and requires heat for application, to "Tarvia B", which is liquid while cold and will percolate into the fine interstices of a well compacted roadway.

Booklets on Request.

BARRETT MANUFACTURING COMPANY

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The Board of Park Commissioners, of Louisville, Ky., has accepted the offer of James P. Whallen to erect in Shawnee Park a bronze statue to his brother, the late John H. Whallen, to cost not less than \$10,000. D. N. Murphy & Bros., architects, were instructed to draw up plans for a \$6,000 shelter house to be erected in Shawnee Park.

Conditioned only on the raising of \$5,000 by public donation, the Park Board of Springfield, Mo., recently adopted a motion

providing \$40,000 for payment for forty-three acres of what is known as the Phelps Grove Park. The tract of land acquired contains improvements made under the supervision of W. J. Johnson. The Park Board also authorized the purchase of ten acres in the northeastern part of the city, known as Walnut Grove, for \$4,000.

The City Council of Little Rock, Ark., has voted \$400,000 to establish a civic center on plans prepared by John Molen, landscape architect, Cambridge, Mass.

itable improvements in this old-time burial ground and will build a new office and tool house. Last summer's drought killed nearly all the young trees, which will be replanted, and the hillside will be planted in red cedars. Mr. Schubert is working hard to get lot owners interested in the perpetual care plan. Quite a number have placed their lots under care. The City Council, however, is not yet willing to sell the remaining lots under a perpetual care contract. The only income is the grave fee, the sale of lots and an annual tax of \$100 for each lot. Mr. Schubert would like to hear from other small town cemeteries in Kansas which have had experience with perpetual care.

CEMETERY NOTES

The following statistics from the annual report of Superintendent F. D. Willis, of Oakland Cemetery, St. Paul, give interesting details of the year's work: Sales of lots, \$19,512; sales of single graves, \$1,674; special deposits on lots and perpetual care, \$442; on lot contract accounts, \$3,273; total receipts, \$50,368.75. Perpetual care fund increased from sales of lots and single graves, \$5,431.80; ordinary expenditures, \$35,541.67; gross expenditures, \$48,782.27. Assets: Land, including sewers, \$95,393.02; buildings, furniture, fences and water service, \$55,924; greenhouse stock and equipment, \$4,347.55; tools and implements, \$712.95; horses, vehicles and stable equipment, \$1,711; foundation material, etc., \$423.35; perpetual care funds, invested, \$142,000; net area of land sold, square feet, 23,974; used for avenues, walks and lawns, square feet, 26,483; total area of unsold land, acres, 52.47; interments to October 31, 1912, 19,136; interments during year, 476.

Riverside Cemetery Association, Albany, Ore., is making extensive plans for beautifying the grounds, and recently had Howard Everts Weed's stereopticon lecture on beautiful cemeteries given in that city to stimulate interest in the work. The plan of the cemetery association is to bring the management under one head and to proceed to beautify it in a systematic way. It will take between \$10,000 and \$12,000 to complete the work, but only one-half of this will be required from the stockholders, as the Board of Directors has secured assurances that the balance will be forthcoming as soon as the first half is subscribed. The officers of the association are: F. H. Pfeiffer, president; C. Williamson, treasurer, and F. C. Veal, secretary.

New Cemeteries and Improvements.

The City Council of Elyria, Ohio, has just announced its decision to purchase Ridgelawn Cemetery at a price of \$3,000.

A tract of twenty acres just north of Wheeling, W. Va., has been purchased by Rev. Father McElligott for use as a Catholic cemetery.

W. H. Reins, commissioner of parks and cemeteries, Saginaw, Mich., has installed a card index system for Forest Lawn Cemetery.

With the object in view of improving Springwood Cemetery, Greenville, S. C., a special committee of the City Council will make a thorough investigation of the improvements necessary. It is probable that the committee will recommend an appropriation of \$3,000 for the work.

East Lawn Cemetery, Salem, Ill., is inadequate for the present needs of the city, and at a recent meeting of the City Council Alderman J. D. Telford, chairman of the Cemetery Committee, advised the purchase of fifteen acres adjoining the cemetery.

Incorporated: Mill Creek Cemetery Association, Danville, Ind., by W. H. Tinder and others.

A society has been formed, with Rev. Father Trotaux as president, St. Martinville, La., to raise money to improve the local cemetery. As soon as \$300 is collected the work will be begun.

A fund of \$2,300 has been raised to put Walnut Grove Cemetery, Tremont, Ill., in good condition. They will invest \$2,000 as an endowment to provide for future care of the burying ground.

A charter has been granted to the Jefferson Park Cemetery Co., Danville, Va. John T. Watson is president; T. A. Fox, vice-president, and J. O. Boatwright, secretary.

A petition is before the City Council, South Bend, Ind., recommending the purchase of more land adjacent to Bowman Cemetery.

The annual meeting of the Newton Cemetery Corporation, Newton, Mass., was held at the chapel, February 4, and the report showed the corporation to be in a flourishing condition. It was voted to erect a new office building of Weymouth seam faced granite, finished in white oak, outside dimensions of building 36 feet by 51 feet, cost to be about \$15,000.

C. Schubert, superintendent of the Alma City Cemetery, Alma, Kan., has made cred-

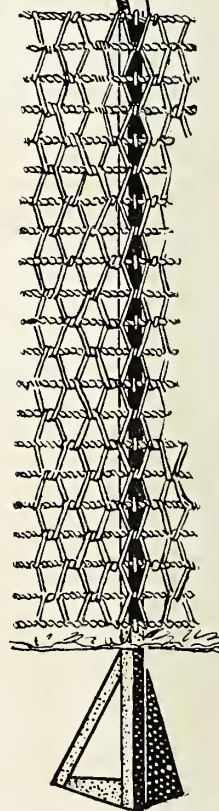
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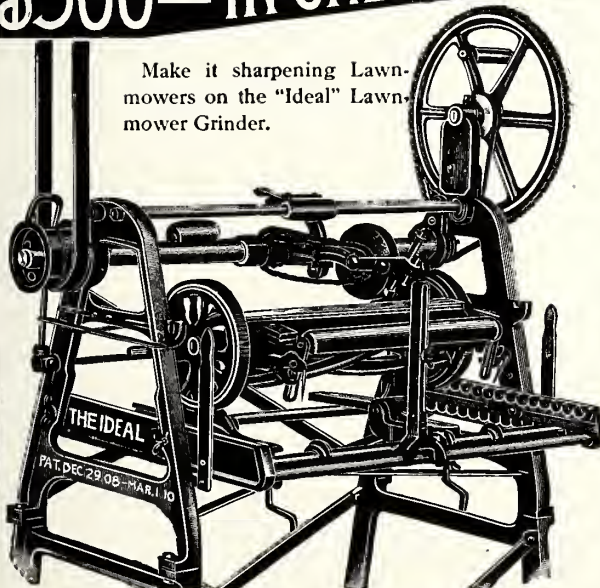
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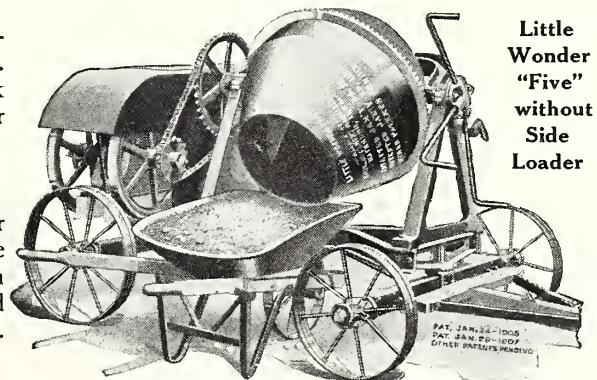
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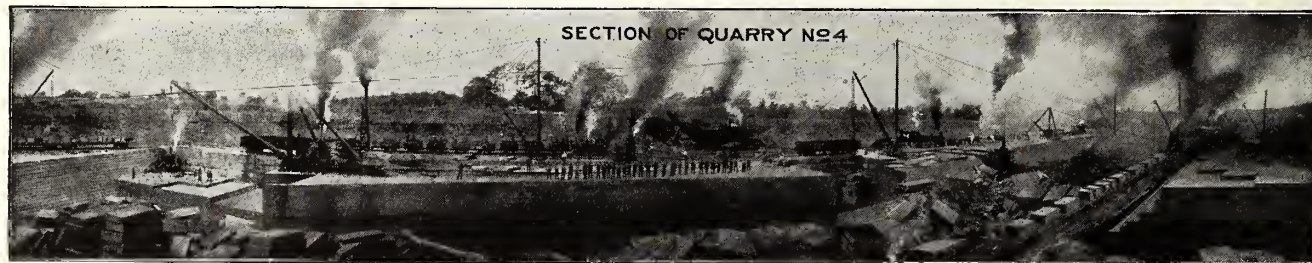


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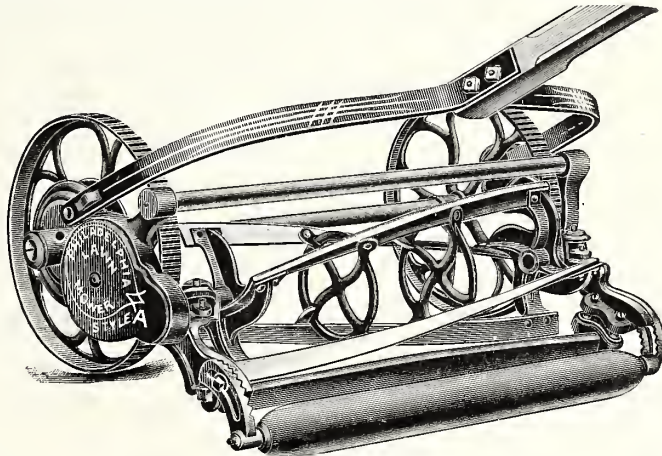
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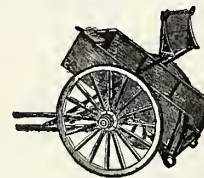
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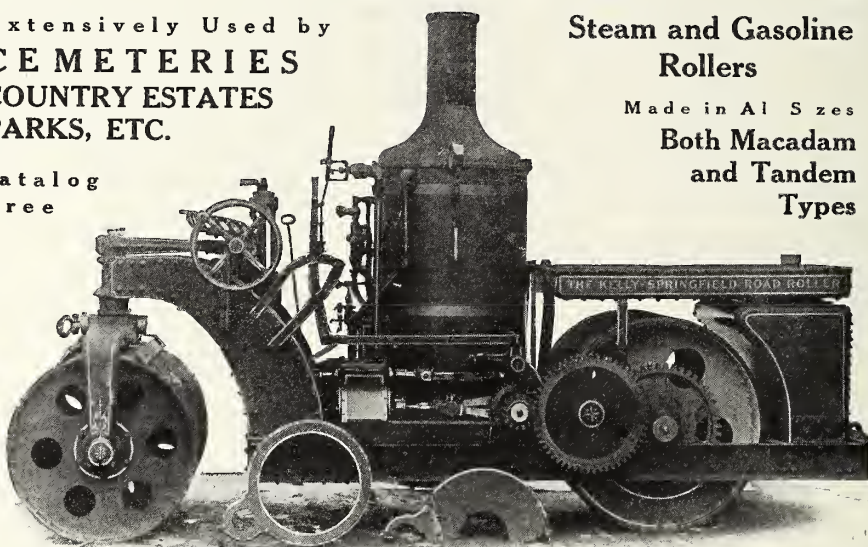
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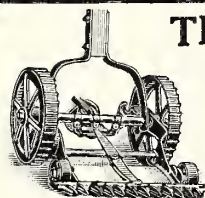
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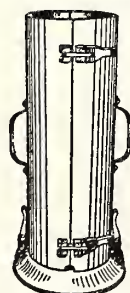


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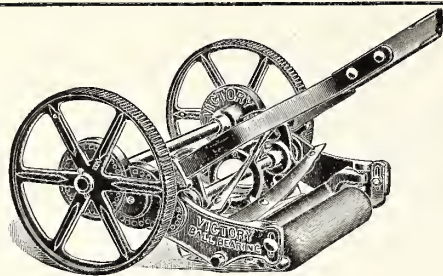
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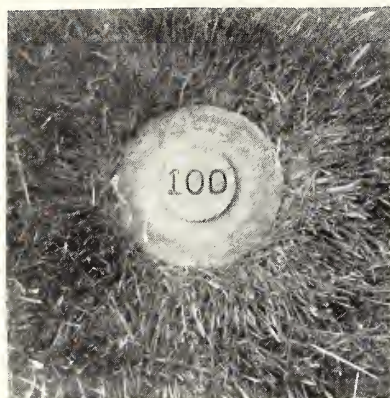
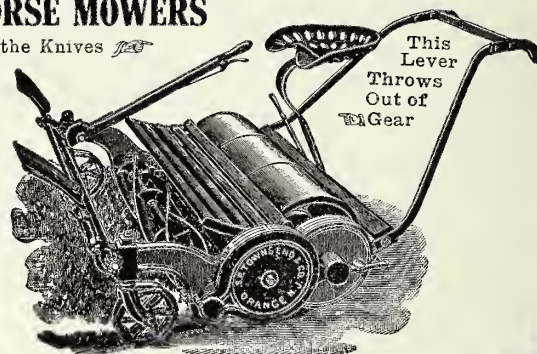
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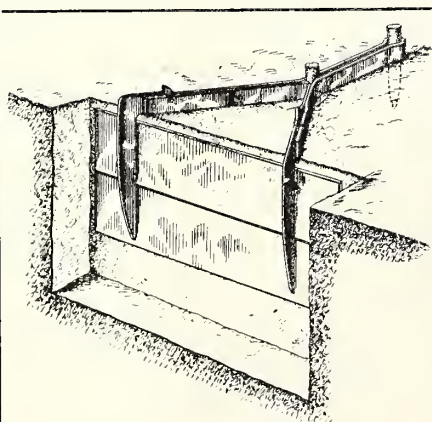
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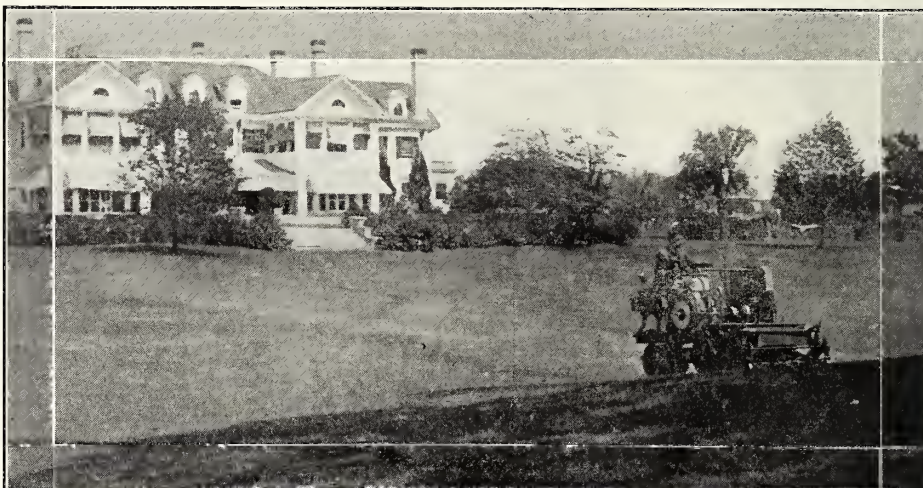
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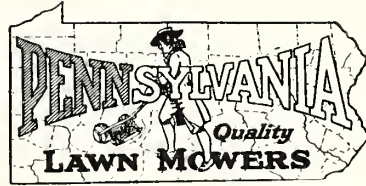
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MORE than a million-and-a-quarter "PENNSYLVANIA" *Quality* Hand and Horse-Power Mowers have been sold in the past thirty-five years. They are to be found in every grass-growing country of the world.

¶ They are the only Mowers made in which all the blades are crucible tool steel, oil-hardened and water-tempered, and positively self-sharpening.

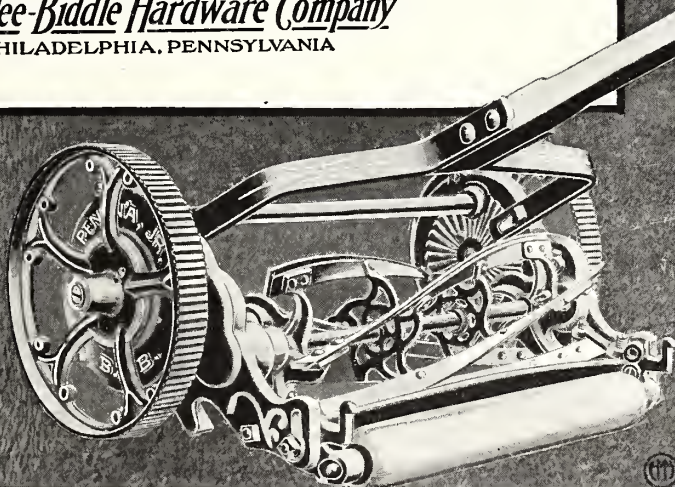
¶ These Mowers will cut more smoothly, push easier, require less expenditure for upkeep, and in every way are the most satisfactory to use.

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Supplee-Biddle Hardware Company
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THE "Pennsylvania"
Grand Horse
Mower with new style
grass box, is the latest
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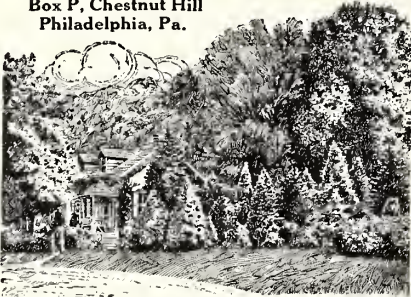
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Send for prices and full description, and Catalogs of
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No one can furnish you better work than we
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Write for our terms and proposition. This cut
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Michigan sold last winter, the largest monument
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We have a great many superintendents and sextons of ceme-
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Over 1,100 outfits sent out to date with a good per cent of
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Don't delay. This means dollars to you.

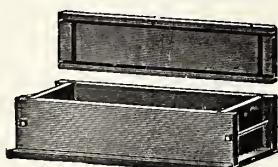
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For Blackboards and Roofing.

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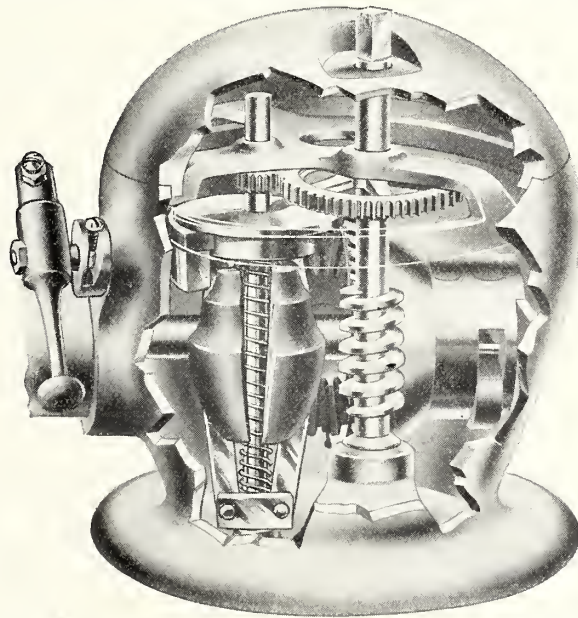
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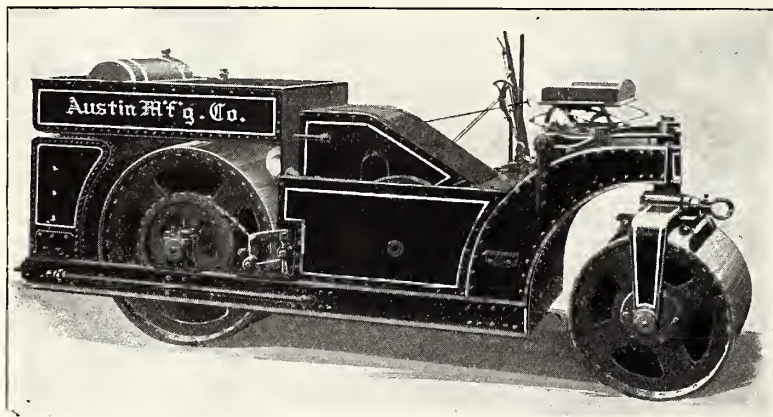
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But one good lawn does not positively point to supremacy in seeds.

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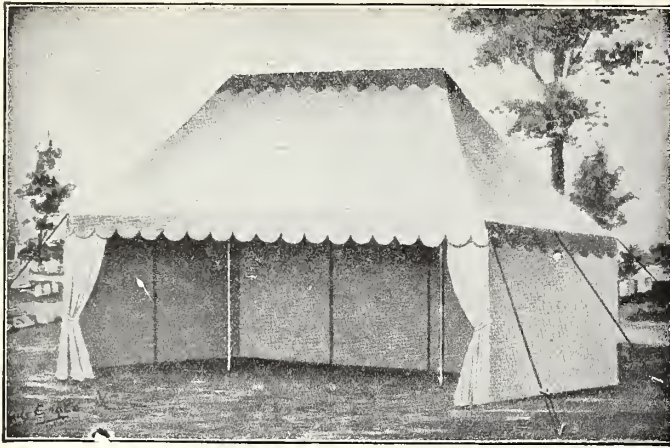
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It does not discolor. It is odorless and will not stain. Solvay Granulated Calcium Chloride prevents dust and weed growth most effectively and

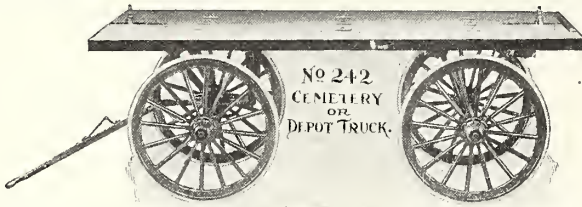
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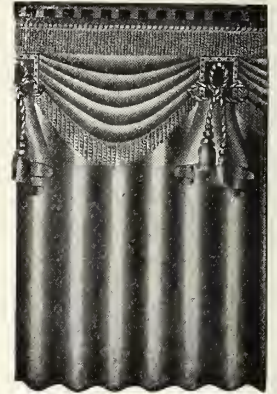
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?

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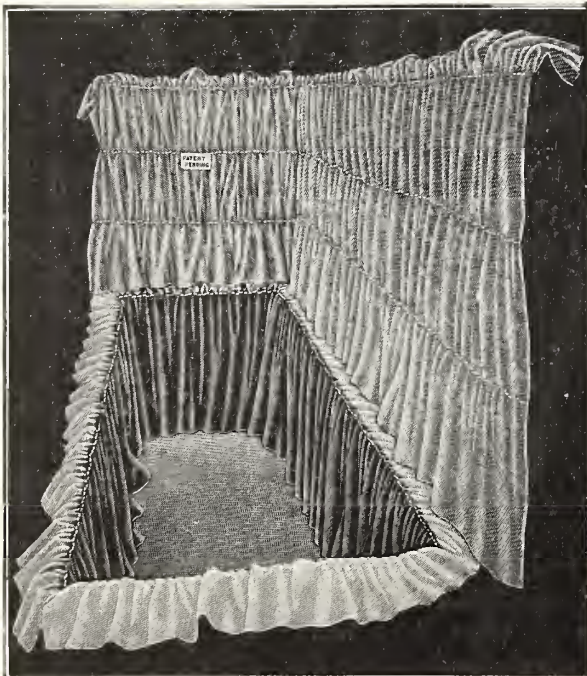
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Durfee Grave Lining
will fit any grave, is a handsome
design and has been engraved at a
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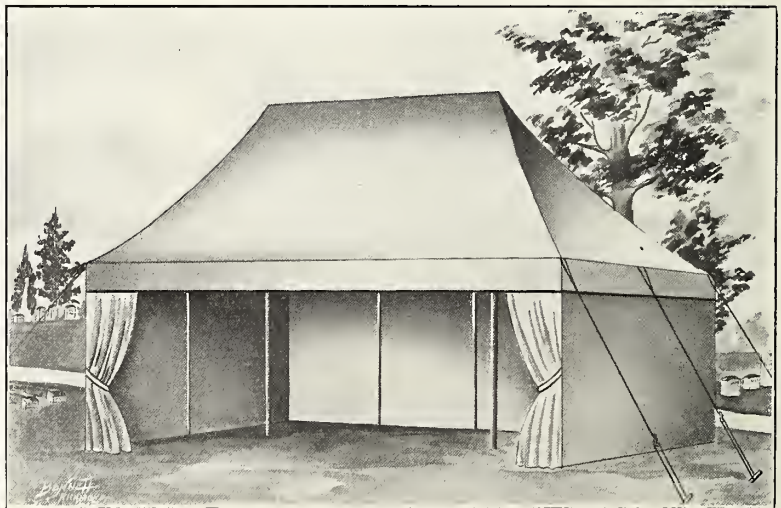
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and take away the fair

ground appearance of the
ordinary tent.

Dirt Covers

Our olive green duck dirt
covers last four times as
long as any oil cloth cover,
and always look better.



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Vol. XXIV., No. 2

APRIL, 1914

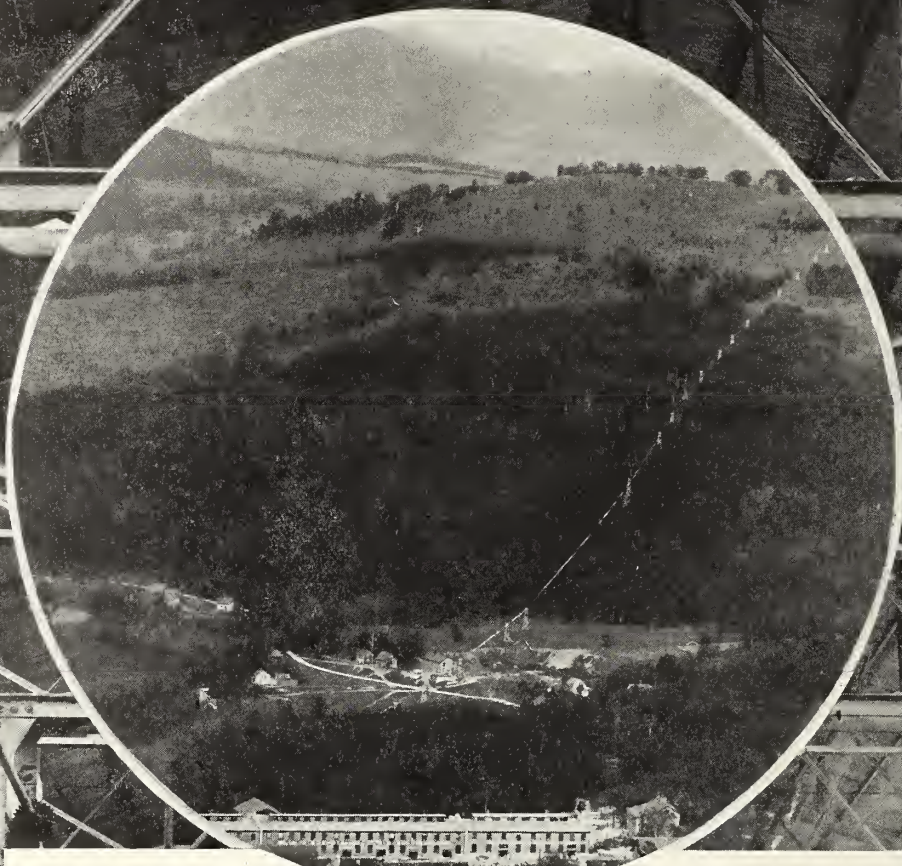
SPECIAL FEATURES IN THIS ISSUE

Varied Attractions of Golden Gate Park, San Francisco—Complete Develop-
ment of a Modern Cemetery—Woodland Trees in the Parks—The Season's
Work in Chicago South Park System—Reorganizing an Old Cemetery
—Supreme Court Forbids Closing of Cemetery



OWLS' NEST PARK IRON ENTRANCE GATES AND FENCE. See page 42
Madison Road, East Walnut Hills, Cincinnati.

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Best Dark Barre Granite

"The Rock of Ages"

is the grade of Barre Granite in which you have noticed a great superiority over every other material.

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LAST month we put the loud pedal on the quality side of our fencings and gateways—now a word about the erection side.

We will sell you the materials outright or contract to erect them complete for you.

This method is a decidedly satisfactory one. It relieves you of all

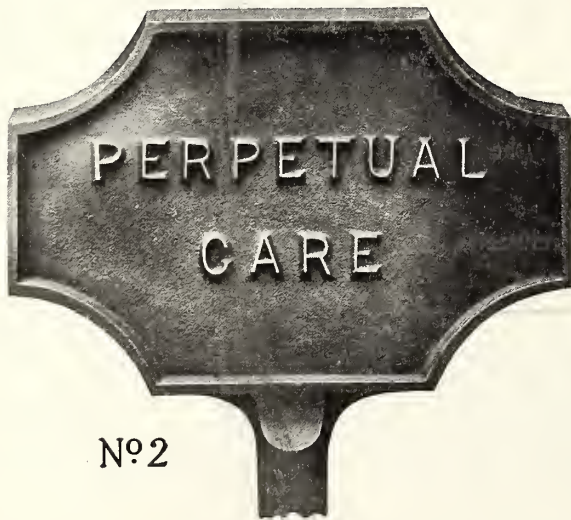
bother and puts the responsibility entirely on us. If there is any come-back—you come back on us. We like nothing better than having the entire job put straight up to us.

If you are considering building a fence or gateway, let's open a fence correspondence, you and I. You might start it by sending for a catalog.

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EDITORIAL

APRIL, 1914

VOL. XXIV No. 2

Broadening Service of the Parks

The account of the season's work in the South Parks of Chicago, printed on another page, is worthy of especial study as emphasizing in definite, concrete fashion the scope of the work embodied in the newer idea of park service to the people. Here is detailed the work of a park organization that probably renders a wider variety of service than any other in the country and one that is generally regarded as a model in the administration of those broader park functions that are associated with the service and play parks. In this system the administration of the year's work has been reorganized to best provide increased opportunities in many directions for the activities of the people, both pleasurable and instructive—opportunities which only a few years ago were not to be found in any public park. The park of today, with its public golf courses, archery grounds, bathing beaches and pools, bait-casting pools, tennis courts, ball diamonds, football fields, skating ponds, assembly halls, gymnasiums, children's playgrounds, branch libraries and other facilities for recreation, amusement and instruction, all furnished at no cost to the users, are very different places to maintain and operate from the park of a score of years ago, the existence of which had for its chief justification the presentation of opportunities to enjoy in a

recreative way the beautiful in nature, harmoniously placed and properly maintained. In the modern parks the attractiveness of nature must be provided as heretofore, but under conditions which make it much more difficult, as is pointed out in the latest report of the South Park Commissioners in the following forcible words: "It is this Twentieth Century development of the service rendered to the people by the parks that brings many new problems to park management. Not that any of the activities introduced into parks are new creations or require the service of hitherto unknown workers, but the amplifications of the service in the parks makes necessary a more extended classification of employees. The difficulty the management experiences is in uniting the efforts of all classes of employes in securing successful results in all directions. This means a development of organization, making it possible to bring about between gardeners, carpenters, gymnasium and playground supervisors, plumbers, police, machinists, painters, roofers, electricians, refectory managers, field-house directors, boatmen, teamsters, clerks, construction men, firemen and all other classes of employees that co-operation essential to the success of the service as a whole."

Reorganizing An Old Cemetery

Probably the most difficult work a cemetery superintendent is called upon to do is to reorganize an old cemetery and apply modern methods of management to an old-time burying ground so as to get efficient results without antagonizing the lot holders to a degree that will hamper him in his work. The admirable summary of the methods by which this exacting task may be accomplished, printed on another page, is full of sound advice that cannot fail to prove helpful to any cemetery that is not entirely developed on modern lines. As Mr. Rutherford very aptly puts it: "Good common sense, mixed with a lot of hard work, is the first and principal requirement for the task." It is not an easy matter to make a modern park burial ground out of a cemetery that consists principally of high mounds, fences, vines

and surplus bric-a-brac and glassware from the home, and the average lot owner is not so easily persuaded that it is time for a change, especially if he has arrived at advanced years. This work should be undertaken systematically, a certain portion to be completed each season, and it should be carried out with extreme tact and caution. The necessity of studying the methods of other cemeteries that have solved some of the problems at hand is important, and the suggestion is made for the preparation of a handbook classifying the cemeteries and outlining, in tabloid form, the distinctive features and conditions of each, so that when in difficulty over some particular phase of the work the less experienced man would know where to turn for advice.

Editorial Notes

Receipts from the use of national forest resources were greatest in Arizona last year.

Dr. C. D. Marsh, of the federal bureau of plant industry, is delivering a series of illustrated lectures to stockmen in the West on the subject of plants poisonous to stock.

The Biltmore forest school, established in 1898 and therefore the oldest forest school in America, has been discontinued. Dr. C. A. Schenck, its director, has returned to his home in Germany.

Canada has a society of forest engineers. Dr. B. E. Fernow, of Toronto, is president, and F. W. H. Jacombe, of Ottawa, is secretary.

Of the three Pacific coast states, Oregon and Washington far outstrip California in the work done by private owners for forest protection.

Lodgepole pine seed sown broadcast on the snow in southern Idaho last spring germinated when the snow melted, and as many as sixty little trees were counted to the square foot. The

summer was so dry, however, that most of the plants died, except where sheltered by brush or logs.

The tenth successive year without a forest fire has just been passed by the Powell national forest in south central Utah.

Yellow poplar, or tulip tree, the largest broad-leaf tree in America, has been known to reach nearly 200 feet in height and 10 feet in diameter.

Mistletoe thrives on the western coasts to an extent not approached in the east. In many places this parasitic growth is responsible, directly or indirectly, for a considerable loss of timber.

The Canadian government is using Indian fire patrolmen to protect the forests of northern Manitoba.

Ghent, Belgium, furnishes practically all of the potted specimens of the symmetrical *Araucaria*, or Norfolk island pine, used as an ornamental foliage house plant, in Europe and America. The United States imports at least 250,000 of these plants in five or six-inch pots each year.

THE SEASON'S WORK IN CHICAGO SOUTH PARKS

One of the most efficiently organized and systematically managed park organizations in the country and one that probably renders a wider variety of service than any other is the South Park Board of Chicago, which is generally regarded as a model in the administration of those broader park functions that are associated with the service and play parks.

A brief review of the season's activities in the maintenance of this highly specialized park organization as detailed in the latest annual report of the South Park Commissioners, will offer profitable suggestions concerning the orderly routine of a year's park work.

During the past decade, the South Parks have been greatly enlarged by the addition of eighteen parks and thirteen boulevards, increasing the length of the boulevards fifteen and one-third miles and the aggregate area from 1,535 to 2,494 acres. But of much greater importance is the increased usefulness and beneficial influence of the parks brought about by providing increased opportunities in many directions for the activities of the people, both pleasurable and instructive—opportunities which only a few years ago were not to be found in any pub-

lic park. The park of today with its public golf courses, archery grounds, bathing beaches and pools, bait casting pools, tennis courts, ball diamonds, foot ball fields, skating ponds, assembly halls, gymnasiums, children's play grounds, branch libraries and other facilities for recreation, amusement and instruction, all furnished at no cost to the users, are very different places to maintain and operate from the park of a score of years ago, the existence of which had for its chief justification the presentation of opportunities to enjoy in a recreative way the beautiful in nature, harmoniously placed and properly maintained. In the modern parks the attractiveness of nature must be provided as heretofore, but under conditions which make it much more difficult.

It is this Twentieth Century development of the service rendered to the people by the parks that brings many new problems to park management. Not that any of the activities introduced into parks are new creations or require the service of hitherto unknown workers, but the amplification of the service in the parks makes necessary a more extended classification of employees. The difficulty the management

experiences is in uniting the efforts of all classes of employes in securing successful results in all directions. This means a development of organization making it possible to bring about between gardeners, carpenters, gymnasium and playground supervisors, plumbers, police, machinists, painters, roofers, electricians, refectory managers, fieldhouse directors, boatmen, teamsters, clerks, construction men, firemen, and all other classes of employes that co-operation essential to the success of the service as a whole.

A recent study of the conditions resulted in a reorganization of the park service. Briefly described, it divides the service into eight divisions, operated under the directions of the General Superintendent, J. F. Foster, with a responsible officer in charge of each division. The divisions and the title of the chief officer of each division are as follows:

Engineering and Construction Division, Chief Engineer.

Maintenance and Repair Division, Superintendent of Maintenance and Repair, H. S. Richards.

Divisions of Playgrounds and Sports,

TABLE OF AREAS AND DISTANCES OF SOUTH PARKS AND BOULEVARDS

	Total Area Acres	Total Length Miles	Improved Area Acres	Improved Drives Miles	Improved Drives Sq. Yds.	Improved Walks Sq. Yds.	Artificial Lakes Area Acres	Improved Lawn Acres	Plantation Acres	Bridle Paths Sq. Yds.	Buildings Sq. Yds.	Sand Courts Sq. Yds.	Outdoor Gymnasiums Sq. Yds.
Jackson Park.....	542.89		542.89	7.19	222,701	250,988	107.64	252.25	65.47	30,893	46,111		15,315
Washington Park.....	371.00		370.00	6.93	140,613	79,410	23.00	244.11	50.00	16,511	25,076	150	
Marquette Park.....	322.68		50.28	.98	24,675	16,940	14.50	34.97			600		
Grant Park.....	205.14		109.62	.81	5,140	10,555		72.04					
Midway Plaisance.....	80.00		80.00	2.58	59,095	14,542		53.10	.28	9,015			
McKinley Park.....	74.88		62.77	.33	9,432	26,968	9.89	38.92	5.00		2,475		
Sherman Park.....	60.60		57.28	1.14	25,092	22,380	10.66	26.24	7.19		5,079	737	10,564
Ogden Park.....	60.54		56.27	.43	9,394	33,581	10.56	23.88	7.59		5,655	838	13,727
Palmer Park.....	40.48		39.94			20,980	.89	24.31	5.86		3,128	1,043	12,412
Calumet Park.....	66.19										898		
Hamilton Park.....	29.95		29.60			32,177	.43	14.85	2.25		2,251	215	19,155
Bessemer Park.....	22.88		19.72			10,524	.57	10.83	2.41		2,550	1,002	9,893
Gage Park.....	20.00		20.00	.10	1,700	14,145	.98	15.00	2.16		90	225	
Mark White Square.....	10.00		9.93			9,372	.20	5.21	.25		2,887	711	7,943
Armour Square.....	10.00		9.00			8,535	.16	3.31	.90		3,636	492	7,935
Cornell Square.....	10.00		8.97			8,540	.18	4.76	.63		2,383	252	7,321
Davis Square.....	10.00		8.90			8,864	.24	4.51	.57		2,536	813	5,794
Fuller Park.....	10.00		10.00			13,090	.28	3.65	1.24		3,290	151	6,835
Russell Square.....	11.47		5.64			6,742	.14	3.41	.33		1,575	272	2,199
Hardin Square.....	7.41												
No. 15 Park.....	19.16												
No. 16 Park.....	18.52												
No. 17 Park.....	20.00												
No. 18 Park.....	20.19												
Michigan Ave. 80'-130' wide		6.16	66.59	5.78	189,187	84,540		13.47					
Garfield Boul. 200' "		3.50	84.85	6.88	182,160	39,645		39.05					
Western Ave. Boul. 200' "		2.81	68.12	2.81	79,305	33,569		48.07					
Grand Boul. 198' "		2.00	48.00	6.09	132,560	21,020		16.09					
Drexel Boul. 200' "		1.48	35.58	3.05	76,640	27,250		14.55					
Prairie Ave. 66' "		1.23											
South Park Ave. 66' "		.75	1.98	.25	6,122	1,710		.39					
Jackson St. 66' "		.67	5.24	.67	16,275	9,098							
Oakwood Boul. 100' "		.50	6.02	.50	17,060	4,500		1.56					
Thirty-third St. 66' "		.31	2.23	.31	8,282	1,946		.37					
Sixteenth St. 50' "		.14											
Twenty-ninth St. 66' "		.17											
Fifty-seventh St. 100' "		.03	.37	.03	900	900							
Loomis St. 66' "		1.47											
Sixty-sixth St. 66' "		1.38											
Sixty-seventh St. 66' "		4.12											
Normal Ave. 66' "		2.08											
Hyde Park Boul. 100' "		.94											
East End Ave. 85' "		.65											
Yates Ave. 100' "		.48											
Seventy-first St. 100' "		.18											
Bond Ave. 66' "		1.82											
Vincennes Ave. 66' "		.12											
Totals.....	2043.98	32.99	1810.79	46.86	1,205,333	811,156	180.32	968.90	152.13	56,319	110,220	6,901	120,893

The total area under the control of the South Park Commissioners is 2,494.59 acres.

Superintendent of Playground and Sports, J. R. Richards.

Mechanical and Electrical Division, Mechanical and Electrical Engineer, W. I. Bell.

Hegewisch; the entering upon the improvement of Hardin Square and the surfacing of 4.05 miles of old park driveways with asphaltic concrete.

About the middle of March, the first

work of composting black earth, and of the cutting and shipping of sod on this farm at Chicago Ridge by the Maintenance and Repair Division. From the latter part of April to the 25th of June, 53 carloads,

TABLE OF CONVENIENCES AND FACILITIES FOR RECREATION IN THE SOUTH PARKS

For the year 1912

	Jackson Park	Washing- ton Park	McKinley Park	Cage Park	Midway Plaisance	Garfield Boul.	Western Ave. Boul.	Marquette Park	Sherman Park	Ogden Park	Palmer Park	Hamilton Park	Bessemer Park	Calumet Park	Mark White Sq.	Armour Square	Cornell Square	Davis Square	Russell Square	Hardin Square	Fuller Park	Grant Park	No. 15 Park	No. 16 Park	No. 17 Park	No. 18 Park	Total
Golf Courses.....	2							1																			3
Tennis Courts.....	114	109	6	2	10	9	2	4	7	20	8	8	8	5	4	2	1	3	2		8	2	2	2	2	2	342
Base Ball Diamonds.....	2	9	3					1	2	2	2	2	2	4	1	1	1	1	1	1		6	1	1	1	1	24
Foot Ball Grounds.....	1	1	1		1			1	1	1	1	1	1	1	1	1	1	1	1			2	1	1	1	1	20
Skating Houses.....																											1
Curling Sheds—3 rinks.....		1																									3
Cricket.....		1																									1
No. of Booths of Swimming Pool.....		206							209	217	228		133	100	192	90	85	125	96		196						1,877
Wading Pools.....		1	1	1					1	1	2	1	1	1	1	1	1	1	1								15
Sand Courts.....		1	1		1				1	1	1	1	1	1	1	1	1	1	1								13
Boat Houses.....		1	1																								2
Electric Launch Station.....		1																									1
Music Courts.....		1	1						1	1	1	1	1	1	1	1	1	1	1								13
Conservatory.....		1	1																								2
Rose Gardens.....		1	1																								2
Floral Display.....		1	1			1																					2
Shelters.....	3	1	1											1	1	1		1					1	1	1	1	13
Refectories.....	2	1	1																								6
Toilet Rooms for Men.....	6	5	2	1				2	4	4	3	2	2	4	1	3	3	3	3		3		1	1	1	1	55
Toilet Rooms for Women.....	6	5	2					2	3	2	2	2	2	2	1	2	2	2	2		3		1	1	1	1	44
Administration Bureau.....		1																									1
Electric Light Station.....		1																									1
Stables.....		1																									1
Inside Gymnasium for Men.....									1	1	1	1	1	1	1	1	1	1	1		1						11
Inside Gymnasium for Women.....									1	1	1	1	1	1	1	1	1	1	1		1						11
Shower Baths for Men.....	6								12	17	7	12	12		24	8	11	12	16		38						175
Shower Baths for Women.....	4								14	15	8	13	13		24	14	14	17	5		28						169
Outside Gymnasium for Men.....			1						1	1	1	1	1	1	1	1	1	1	1								11
Outside Gymnasium for Women.....			1						1	1	1	1	1	1	1	1	1	1	1								11
Running Tracks.....									1	1	1	1	1	1	1	1	1	1	1								10
Children's Inclosed Play Grounds.....			1						1	1	1	1	1	1	1	1	1	1	2								12
Assembly Halls.....									1	1	1	1	1	1	1	1	1	1	1		1						1
Reading Rooms.....									1	1	1	1	1	1	1	1	1	1	1		1						1
Club Rooms for Men.....									1	2	1	1	1	1	1	1	1	1	1		1						12
Club Rooms for Women.....									1	2	1	1	1	1	1	1	1	1	1		1						12
Roque Courts.....		4																									4
Hockey Field.....																											2
Soda Water Fountains.....	1	1																									2
Archery Targets.....		14																									14
Cricket Court (Lawn).....		3									1																5
Bowling Green.....		1																									1
Fly Casting Pool.....		1																									1

Police Division, Captain of Police, T. E. Richards.

Landscape Gardening Division, Landscape Gardener, Frederick Kanst.

Purchasing Division, Purchasing Agent, J. L. Mittenbuhler.

Refectory Division, Manager of Refectories, J. C. Cavanaugh.

Carefully studied rules and regulations for the operation of the divisions are in force.

In addition, to bring in constant daily communication with the General Superintendent and each other, meetings with all division heads present are held every month and oftener if thought desirable for the discussion of such questions of general character as may be brought forward. The organization has been in operation since the first of March, 1912. Co-operation between the divisions is excellent.

The most notable work of the year was the entering upon the construction of a five-foot concrete tunnel, about fifty feet under the surface of the ground from the city's water tunnel at Drexel avenue and 73rd street and Cottage Grove avenue to the pumping station at the power house in Washington Park. The length of the tunnel is 10,823 feet.

Other works of construction were the improvement of twenty-acre parks at Grand Crossing, Dauphin Park, Irondale and

month of the fiscal year, heavy and continuous snow storms occurred, the snow being blown into drifts several feet deep. From 25 to 30 teams and a large force of men were kept busy for some time cleaning the snow from the drives on Michigan avenue and Jackson street down-town, in addition to the Park teams employed in plowing the snow from the driveways and walks on the principal boulevards and in the larger Parks.

During the slack season before the opening of the spring work the Maintenance Foremen were given vacations as fast as opportunity permitted.

When the skating season was past the skating houses in various Parks and the curling house in Washington Park were taken down and stored until the following season and temporary plank walks were removed. Owing to the backward spring and wet ground the usual spring opening work was delayed, but as soon as the ground became sufficiently firm the lawns were cleaned and seeded or sodded wherever the grass had been worn out or killed by the frost during the previous winter. The sod used on the lawns was cut by the South Park employes on a farm at Chicago Ridge, Ill., just south of Chicago, the owner of the farm receiving 2½ cents per square yard for all sod cut. During the month of April the Engineering and Construction Division was relieved, by request, of the

totaling 48,912 square yards of sod were cut and shipped from this farm to the City and distributed among different Parks and Boulevards.

Although the wet weather delayed the work on sodding, it had the advantage that the sod did not require the sprinkling that would have been necessary had the work been done later in the season.

During the latter half of April, 12 cars of composted earth were shipped to Chicago from this farm for use in leveling the lawns in Washington and Jackson Parks, and for the flower beds around the edge of the lily-pond in Washington Park. Later in the season one car was shipped to Palmer Park for leveling lawns. Beginning about July 5, and lasting till October 31st, work was done on composting black earth on the farm at Chicago Ridge for use in lawn or plantation work as needed. The earth, broken sod, etc., was mixed with about one-sixth as much rich manure and piled on a heap to allow the manure to rot thoroughly. On October 31st, 1912, the compost heap contained 18,000 cubic yards of material.

When gravel walks became firm in the spring they were rolled, and park seats, repainted during the previous months, were set out among them. Defects in the drainage system of walks or driveways, such as heaving on account of frost, broken pipes, etc., were repaired at this time.

Macadam driveway repairs were begun on Western avenue and on Garfield boulevard in April, but because of the wear of automobile traffic, it was impossible to keep the macadam drives in a perfect state of repair at all times.

During the latter half of April the movable drinking fountains were set out in the parks and along the boulevards and turned on, the ornamental fountains being turned on shortly after.

Some warm weather in the latter part of April caused the grass to grow rapidly and lawn mowing was begun on May 2nd and continued till October 15th. During May the lawns were in excellent condition. Early in June after some days of hot weather which affected the lawns, grass-watering was resorted to and was continued at intervals as occasion required until September 16th. In the larger Parks a new method of watering the grass was adopted. Where heretofore a man holding one hose moved from spot to spot over a small area, in this method the same man tended from 16 to 20 lawn sprays which were placed on the ground and all turned on continually, the man moving each spray to a new spot as he made his rounds, it taking him about twenty minutes to cover his territory. From 96 to 106 sprays were used on the lawns of Washington Park, these sprinkling continually from 5:00 a. m. to 9:00 p. m. From the middle of June to the latter part of August the sprinkling was done by two shifts, one working from 5:00 a. m. to 1:00 p. m., and the other from 1:00 p. m. to 9:00 p. m. The average number of men on this work daily in Washington Park was 12.

The total cost (including that of rubber

hose worn out,) of watering the lawns on 8 boulevards and in 20 parks during the season 1912, was \$25,088.05.

A total of 528,144 square yards of surface were treated with the light road oil during 1912, of which 429,539 square yards were given one application of the oil, and 98,605 square yards received two applications. On the surfaces treated once .253 gallon of oil was applied per square yard on an average at a cost of \$.0139 per square yard for oil and \$.00149 per square yard for labor, a total cost per square yard of \$.0154.

Because of the scarcity of rough manure, 216½ tons of dried and shredded mule manure, analyzing highly in plant food elements, were purchased for use on the Park and Boulevard lawns. The price of this fertilizer was \$10.40 per ton when the bags in which it was shipped were returned in good order. Deliveries were made on most of this in December and the mild weather was most suitable for its application. In Washington Park the manure was mixed with an equal quantity of rich black earth before it was spread on the lawn. It was applied as nearly as possible ¼ inch thick.

Tennis nets were put up as early in the spring as the condition of the ground permitted, several being up in April. As soon as the ground became dry and firm the number was increased until in May 219 courts were in use, and in June 230.

The croquet courts in Washington Park were in use the latter part of April. Four courts are maintained in this Park throughout the summer, although playing is permitted on any part of the lawns where permanent injury to the grass does not result.

The two clay roque courts near the boat-landing in Washington Park were kept in the best of condition during the season, the surfaces being smoothed and sanded daily.

The total number of persons employed in the Maintenance and Repair Division for all purposes during the fiscal year ranged from 230 persons and 1 hired team during the last week of February, 1913, to 690 persons and 28 hired teams in the third week of June, 1912.

It has been the aim of this Division to attain a high standard in serving the public, and the various foremen have always responded generously in their efforts in this regard.

The opportunities for games, sports and other recreative activities provided in the various parks are more and more used by the public each year and the supervision, with the experience of the years, is growing more efficient, resulting in a much greater usefulness to the people in the many directions of improving the general character, both physical and moral, of those living in the localities in which the parks are located.

A radius of one-half mile sweeping about one of the small parks as a center covers the average area furnishing regular visitors to such parks; but the area of the beneficial influence of the park equipped with facilities for recreation to be found in one of the small parks extends to a much greater distance and can scarcely be over-estimated.

It is interesting to note that different individuals registered in the various departments of the service in one of these parks, represent on the average at least 1,000 families.

COMPLETE DEVELOPMENT OF A MODERN CEMETERY

By OTTO SONNE.

IV. Grading and Lawn Making.

An important question concerning the improvement of a large tract of land is the amount and character of work to be assigned to the lawns. The term lawn is very elastic and is applied to anything from a gnawed-off pasture to the real article with a compactness and touch of a Brussels carpet. A great deal depends on the first work, but even with the greatest care in preparing the ground, selecting the grass seed, rolling, etc., it becomes more and more impressed on an old hand that the Englishman was not so far from being right when he said that it took a hundred years to make a lawn and two hundred to make a good lawn. In order to obtain the best results the whole area should be prepared during a period of two years or more before the final seeding, keeping it ploughed and harrowed, supplying it with manure, artificial fertilizer, lime or what is needed, keeping it periodically in motion to have all weeds destroyed, perhaps a

crop or two ploughed under, and finally careful spading, rolling, raking, seeding, repeated rolling, etc., for ever after. This is costly, however, both in time and money, and not practical where the object is to have roads, drains, water pipe, grading, etc., in finished condition by contract, together with the lawns, in a limited space of time, and particularly at a reasonable outlay.

Under the conditions governing the Arlington Cemetery the construction work preceding the lawn work was too extensive to leave much time for the latter, and the area was so large that, both on account of time and cost, spading was out of the question. Owing to the dovetailing of the various kinds of work, grading of lawns and roads, digging and backfilling of trenches, clearing of stumps, etc., and the necessity of having one step wait for the finishing of others, it was only the large, open areas that could be ploughed

and handled during the first season of the contract, 1912; the final preparing of lawns could not be attacked in earnest until the summer of 1913, and there is some seeding left to be done this spring. This being foreseen at the time of writing the specifications, the best that could be done was to prescribe fertilizing, ploughing, harrowing, rolling, seeding, rolling again, etc., with the knowledge that on the day of delivery on the part of the contractors the lawn cannot correspond to the Englishman's two hundred year lawn, or even the hundred year one, but that repeated care in the direction of mowing, weeding and rolling will finally bring the desired result.

The grading of the lawns was planned with the view of maintaining the natural undulations of the ground, but obliterating all minor irregularities, and, of course, joining in a natural way the edges of the roads at their established grades without any distinct slopes that might remind of



FIRST STAGE, PREPARING LAWNS EAST OF TRIANGLE.

railroad work. Except where the depth of excavation or filling was negligible the top-soil was removed and stored, the surface graded to sub-grade and the top-soil replaced. On parts of the area the removal of field stone was a considerable undertaking, and there was an opportunity to observe the phenomenon, not an unusual one, that after the removal of stone, even if ever so carefully done, each succeeding ploughing or harrowing would bring a new crop to the surface, the abundance of which seemed entirely unaffected by the previous attacks.

As mentioned in a former article, parts of the ground had been under agricultural cultivation up to a few years before they were turned into their new purpose, and very much overgrown with weeds and bushes. There had been no opportunity to undertake a thorough examination beforehand of the character of the soil, so the specifications for the work were made out to call, in a general way, for the application of fifteen tons or more of well-rotted manure to the acre, but the writer, with some misgivings as to the thoroughness of his farming experience, and especially as to the requirements of the land in question, sought and obtained the valuable assistance of the New Jersey Agricultural Experiment Station, with the result that the soil was analyzed and the treatment changed. The most important defect was a deficiency in lime, and for that reason was prescribed an application of two tons pulverized limestone per acre. This, of course, is not to be considered as a plant food, but only as a corrective to neutralize the acidity of the ground. The amount of manure was cut down to ten tons per acre and supplemented with a fertilizer three hundred pounds to the acre of the following mixture:

150 lbs. nitrate of soda,
150 lbs. sulphate of ammonia,

400 lbs. 730 tankage,
900 lbs. acid phosphate,
400 lbs. muriate of potash,
to be applied immediately before seeding.

The seeding was done wherever practicable by machine, supplemented where necessary with hand work. The seed was sown at the rate of six bushels to the acre and consisted in the main of Kentucky blue grass and red top, with minor quantities of other kinds and a sprinkling of white clover. The mixture varied somewhat according to the character of the ground, whether high or low.

Inasmuch as disappointment is often more instructive than unqualified success, it may be worth mentioning that an attempt was made to use a gang plough worked by a traction engine, as shown in the cut. It did not prove economical, owing to the numerous sections into which the roads divided the land and also to the frequent meeting of trees, each causing a

rather large area to be taken care of by other means; and altogether the straight, unbroken sketches, where undoubtedly the method would be economical, were so few that it was discarded and ordinary team work substituted.

In connection with the description of the lawn work it would be natural to mention such special features as have suggested themselves to introduce variety to the grounds: systems of formal paths emphasizing the location of especially desirable lots, formal grading on the lines of what are commonly known as sunken gardens, tountains, widenings of the brook to form pools or ponds, etc., but as these features happen to be the ones that remain to be finished this spring, the writer prefers to postpone their description till he can accompany it with photographs of finished work. The same should be the case with planting, but as that is a subject that is treated with special reference to its appearance several years hence, it is hopeless in this case to await effective photographs, and although this branch of the work has not even reached the point where plans have been made and approved, it may be well to outline the general ideas that should form the basis for the planting.

The area around the main entrance and some of the especially arranged areas are the only places where formal planting is called for. The cemetery at large is designed on natural, informal lines and the planting should correspond. The large trees remaining form an important nucleus and should be supplemented with shrubs placed with a view of giving variety to the scenery, so that extensive, open lawns, dotted only here and there with clumps of shrubbery and trees, will alternate with sections of denser growth, long, open vistas with more limited views. In general, just as important as it is to open up views, perhaps to sheets of water, distant hills or mountains, etc., just as important is it



TRACTION ENGINE AND GANG PLOW.

to interrupt occasionally these views and have them reappear a little farther on, seen from a slightly different angle and with different framing; it is like presenting a new picture. The writer was highly impressed a number of years ago in observing a view from a bench on a hillside. It consisted of a magnificent stretch of lakes lying far below, surrounded by wooded

and each opening will give a new view and lend a variety and charm otherwise absent.

Call it an illusion if you like, but, then, illusions are very pleasant at times, and the above points to a law that is worth observing when opportunity offers, and it nearly always does. An extensive lawn should be broken here and there; a brook or lake should present views of varied ex-



PLOWING UP THE OPEN AREAS.

hills, and the foliage of a single young tree standing a few feet in front of and below the bench cut the view in two, giving two views of a quite different character, but equally charming. Then, by moving over only to the other end of the bench, the tree was made to divide the scenery in a different place, and the change in the landscape was astounding, just as charming as before, but so different. That one little tree, whether planted on purpose or not, was the means of giving the observer four distinct views where otherwise there would have been one, wider in scope but no more impressive than the four divided ones, and if the observer should insist on having the whole thing at once, all he had to do was to step down in front of the little tree, but he would soon return to the bench. A similar observation can be made where a road skirts a lake. If the country is open you see the entire lake from everywhere and the view changes so gradually as you proceed that it is hardly noticeable. But cut off the lake entirely here and there with a group of planting,

tent and character, etc., but to establish a general formula that holds good everywhere is as impossible as to prescribe a universal rule for the proper arrangement of objects in a painting. At all events, it is too big a job for the writer, and if treated fully would keep PARK AND CEMETERY busy for a long time to come. Each case is a problem in itself and requires its special treatment, and it is just as well, or the world would be too monotonous. It may be said generally, however, that on an extensive area there is room for trees and shrubs, detached and single, in smaller and larger clusters and in solid masses.

On a cemetery it should be considered that the ground is meant to be used, and for that reason the areas given over permanently to planting should be limited; still, the cemetery, whether large or small, will generally attain a ripe old age before being utilized altogether, and space can very well be spared for planting to serve a number of years and then to be moved or thinned out as necessity dictates.

Regarding the character of planting ap-

propriate for a cemetery, much has been said in favor of preserving the dignity and quiet and against a display of flowers. Yes, perhaps it will prove ill-suited to have large masses of flowers of too vivid coloring; masses of bright tulips, salvia, etc., belong elsewhere, and so do ramblers covered with roses to the exclusion of all foliage, but each has its legitimate field. Among the flowering shrubs, however, there are very few so pronounced as to be offensive under any circumstances, and the writer admits never to have suffered any great shock at seeing a group of shrubs in full bloom. If properly arranged there is always foliage enough to assert itself, even in the most gorgeous mass of rhododendrons, and no one who has the good fortune to see the acres and acres of kalmia in full bloom along the Tennessee creeks will venture to call their effect disquieting.

Somehow a display of flowering shrubs seems to possess a certain quiet, an impression that is possibly created by the knowledge that the flowering is only an incident in their existence; in contrast to most herbaceous plants, the shrub before and after is the real substance. And then, where is our consistency, anyhow? If a display of flowers is considered too gay for a cemetery in general, then why are the same flowers considered appropriate in overwhelming masses at the moment of most intense grief, the funeral? At least, the flower beds have no ribbons attached.

The writer will not let this opportunity go by without expressing the most hearty agreement with Mr. Samuel Parsons when he pronounces weeping trees to be a travesty on mourning, that should be banished from a cemetery, or, at most, they should be restricted to a few places where it is apparent that they have "just happened"; otherwise they are as artificial as a black border on stationery, broken marble columns, etc.

But—better not continue, or there will be trouble brewing. Any discussion of this kind is apt to run contrary to somebody's pet ideas, of the kind that we all have on some subject or other, with a nervous irritation arising each time we see them ignored or opposed. Somebody step in now and say something definite on this subject and see where he will land.

REORGANIZING AN OLD CEMETERY

An address before the Association of Cemetery Officials of Canada, by F. H. Rutherford, Hamilton Cemetery, Hamilton, Ontario.

Like ancient Gaul, cemeteries of today might properly be divided into three parts, namely, the organized, disorganized and reorganized, with the disorganized one far exceeding in number the other two classes. The modern cemetery of the large city has been placed upon such a systematic basis as to preclude the possibility of much criticism, but in regard to the hundreds upon hun-

dreds of village, town and small city cemeteries, many of which (speaking moderately) are absolutely disorganized, a field for work for this association would seem to be presented.

If any attempt has been made to remedy these conditions, few at least have been the results obtained. If, however, it be maintained that it is a difficult matter to deal

with these cemeteries whose managers display no willingness to co-operate, there surely seems to be an excellent opportunity for the broadening of our influence by supplying, either by individual, or, better, by combined association effort, the helpful advice and support so much needed by the superintendent, who is endeavoring to reorganize an old cemetery.

Most towns and cities at some time or another begin to either take some notice of their municipal cemetery, if they are fortunate enough to possess one, or else have commenced to demand from the managers of the private cemetery more consideration than they have before been receiving.

At this stage, when the citizens or cemetery owners have begun to bestir themselves, they are, in many cases, met with some problems that are not the least easy of solution; and so, while at our conventions we may deal, and properly so, with the higher and more aesthetic side of cemetery management, yet it might be wise to occasionally interest ourselves in the little fellow, who without any million dollar fund and face to face with questions that would worry bigger men, is working out these questions with and, in many cases, in spite of the lot owners; pacifying here and compelling there, until, if blessed with a sense of proper proportion, he is rewarded some day (provided he starts as a young man) by seeing the lot owners assisting in reforms which some of them at first bitterly opposed. And the same sense of proportion, or in other words, that good common sense, mixed with a lot of hard work, is the first and principal requirement for the task.

In the case of a municipally owned cemetery, probably the first step taken should be to have the management of the grounds transferred to an independent board, composed of citizens who have plenty of leisure time, and whose terms of office would be long enough to ensure a continuity of plans.

Then follows the framing of rules, and the board and superintendent that expect to enforce absolutely a perfect set of rules in a year or in ten years are going to endure some moments of bitter disappointment; for, if it were possible to frame this ideal code, it would be absolutely impossible to enforce it entirely in so short a time.

Citizens who have come to consider that a cemetery consists principally of high mounds, fences, vines and surplus bric-a-brac and glassware from the home are not so easily persuaded that it is time for a change, more especially if these citizens have arrived at advanced years of intelligence.

Make your rules as nearly perfect as is possible. Shape your plans all in the one direction, and then, assuming that all lot owners are Missourians, proceed to show them what might be done.

If the superintendent is fortunate enough to be possessed of full knowledge of his work, so much the easier, but even if inexperienced, the task is far from hopeless.

Some slight benefit will undoubtedly be derived from the perusal of the literature of other cemeteries, but it would seem to us that it is absolutely necessary that these cemeteries should be visited, not necessarily the magnificent ones, studded with mau-

soleums, memorial chapels and the like, although these are educative, but the more modest burial grounds not overburdened by great wealth, whose superintendents have fought and are fighting similar difficulties, and are ready to share that knowledge gained perhaps by bitter experience.

And here again it seems that there might be a field for work for our association in the preparation of a handbook classifying the cemeteries represented in the association and outlining, in tabloid form, the distinctive features and conditions of each (this information to be supplied by the several superintendents), so that when in difficulty over some particular phase of the work the tyro would know where to turn for advice.

Is it not a fact that every superintendent has solved or is solving his own individual problems, and therefore how helpful it would be for one in doubt to have some means of knowing that a certain other cemetery with the same climate and soil conditions has already met and successfully overcome the difficulty that he himself is experiencing.

These visits should be of at least annual occurrence, and should be undertaken with an open mind, overlooking what, as he gains experience, appear to be defects in others, and never allowing that experience, derived principally from others, to engender a know-it-all attitude, which is absolutely fatal.

When ready to commence work the lot owners should be taken into the superintendent's confidence, and, until proven guilty of animosity to the new rule of things, all should be adjudged as friends. Tell them your plans and the reasons, and then proceed as far as may safely be attempted to make them do as you advise.

As time passes the chronic kickers will be discovered, and to these while acting fairly, no special consideration should be shown; for if the superintendent is on the right track, public opinion will uphold him.

The new section, as opened, should conform strictly to the best usages, and so should be an example to owners in other sections of what might be accomplished. But the work should not rest there, for the campaign should be carried, as soon as possible, into the older portions; and while the degree of power possessed by the board will necessarily govern to some extent the amount of work to be attempted, yet it can be safely asserted from experience that if when complete plans have been made for the regrading and improving of a section, the lot owners are notified fully of the intended changes, with the reasons for these, the objecting owner will be in such a small minority that the superintendent may safely ignore his objections.

This work of improvement should be undertaken systematically, a certain portion to be completed each season, and it should be commenced most cautiously, especially for

the first two or three years when the system is on trial, every effort being made to show all possible respect for the feelings of those accustomed by years of experience to the old order of things, resting assured that each year's work will be easier than the last.

The money for this work of improvement must be derived from some source, and in the absence of any fund for the purpose this money might be derived from the sale of new ground without resulting in any great hardship to the purchasers, especially in a municipally owned cemetery, where profits are not required, it being still possible to provide a fund sufficient for the care without making the cost of the ground exorbitant. Certainly the provision for a time of this extra money is necessary, from whatever source, and certainly also the likelihood of there being any funds accumulated under the old management is very remote.

It is hardly necessary to say that the commencement of a perpetual care fund should be undertaken at the outset, and while probably the corresponding increase in price of ground will come as a shock to the unthinking, and while it is possible that provision will still have to be made in the municipal cemetery for the poorer citizen, yet it should be possible to so educate the people that in a few years a sum would be derived from the sale of every lot to provide for its care (after setting aside the necessary sinking funds).

An educative campaign in reference to the perpetual care of the older cemetery should also be started, and in order to emphasize the advantages derived from this care the annual charges should be reasonably high.

Practically every letter or statement leaving the office should contain an enclosure dealing with the advantages of this perpetual care system, and it will be found that soon the citizens, adopting these arguments as their very own, will be the superintendent's best missionaries to the benighted.

As soon as possible every department of the work in the cemetery should be assumed control of completely by the board, no person being allowed to disturb the turf on any lot without special permission, and when a definite rule has been established as to the location of flowering plants, we believe it advisable and economical to provide for the use of lot owners, free of charge, the services of gardeners who will undertake entirely the placing of these plants, thereby eliminating the possibility of individuals displaying their several and varied artistic ideas.

Considering the nature of the soil and contour of the land, the best style of roadway should be decided upon, and a systematic scheme of road-making undertaken with the object of arriving some day at

complete uniformity in this department of work.

As a valuable assistance in the work of improvement, an example should be presented yearly by the judicious planting of public portions of the cemetery of what ordinary good taste would produce, and the superintendent, no matter how inexperienced, will find this department one of the most interesting studies, as well as one of the greatest pleasures, in connection with his work.

And now, when all plans are laid, the one great effort should be to give to these owners, who are supporting the efforts of the managers, full, and more than full, value for their investments.

Good workmen are necessary and (at the risk of contradiction) the division of the

cemetery into sections and the placing of groups of these men, with some recognized head in each section, seems to be the most reasonable method.

In this way a visitor would always be able to find an employee near by to whom his or her troubles may be told, so that, even without telephone connection, these troubles may be forwarded promptly to the office, thus enabling the superintendent to supply a remedy when the section foreman is unable to do so.

Again, by this plan, it is possible for the foreman, under the guidance of the superintendent, to gain an intimate knowledge of each lot, eventually learning the peculiar condition attached to each, and (especially in the case of the class of cemetery under consideration) knowing just the kind of

care to which each lot is entitled, for we believe that there should be a marked distinction made between the care given to the special care lots and that given to the ordinary or rough care portions, and as an aid to this, marked maps might be placed in each section, which would result in a more intelligent interest being taken in the work of the assistants.

The foregoing ideas, the result of many educative disappointments, touch in not the most complete nor clearest way upon some of the questions involved in undertaking the reclaiming of a neglected burial ground, the adding to a municipality of another creditable institution, and the relieving of the lot owner of much of the sorrow, so necessarily connected with a cemetery, however beautiful.

VARIED ATTRACTIONS OF GOLDEN GATE PARK

Golden Gate Park of San Francisco still holds a unique place among park creations for its remarkable variety of attractions, both natural and artificial. Apart from the sense of delight that views of foliage, meadow, woodland, lake, ocean and mountain range confer, the fact is still significant in this age of progress materially, that the investment is the best that San Francisco ever made. All that the city appropriates annually for the maintenance of the park is but a small proportion of the taxes laid on lots and tracts of land

that have become immensely valuable by reason of the park development. Moreover, the value of adjacent property will continue to increase until the ocean frontage near Golden Gate Park will really be the front of San Francisco.

The increase in value of land is not limited to the territory which may be designated as the park zone, but extends to all sections of San Francisco and the Bay region. Golden Gate Park is a field of recreation, and a source of delight for all Californians.

As early as 1888, Frederick Law Olmsted predicted that "Golden Gate Park was to have a unique and incomparable character." He regarded its development as an interesting problem to be studied in a careful and sustained manner. It is the judgment of the Park Commissioners, and of John McLaren, Superintendent, that the time has now arrived for a serious study of the problem. Since 1906, much of the money allowed by the Supervisors for the parks has been expended to restore Golden Gate Park and the small squares and



CYPRESS, BUENA VISTA PARK, SAN FRANCISCO.



JAPANESE TEA GARDEN, GOLDEN GATE PARK.

plazas of the city to something like the standards of beauty and convenience which were noted prior to April of that year. The damage to Golden Gate Park by reason of refugee occupancy after the fire was estimated at \$174,000, and it was then understood that the Relief and Red Cross Corporation would pay that amount to the city for the benefit of the Park fund, but no payment on this account has been made.

The annual cost of maintaining Golden Gate Park is steadily increasing. Extension of the cultivated area to the ocean on the west and to the limits of the reservation north and south, renders the employment of more help absolutely essential. There is likewise an unceasing demand for more water, more loam and for more material and labor to keep the driveways in first class condition.

The problem now presented to the Commission is whether Golden Gate Park shall be maintained in the manner which has done so much to give it renown in the world of parks, or to divert funds which are needed for the main reservation, in order to improve and adorn Lincoln Park, Balboa Park, and perform the work needed to preserve Buena Vista Park and the smaller squares, plazas and school lots. There is not sufficient money available to improve and keep up the smaller reservations without neglecting some of the features which are essential to the eminence of Golden Gate Park.

The boulevard along the shore of the

Pacific from the Cliff House south to the county line is the dream of the landscape architect. It will be recognized as a park feature unique, wonderfully beautiful, and readily accessible to a vast population. It is the desire of the commissioners to make the boulevard 250 feet wide. Reinforced concrete piers 30 feet in length are to be sunk to a distance of 18 feet in the sand. At the base of the closely placed piers there will be lodged rough rubble stone to prevent erosion by the waves of the ocean. The plans approved, or under construction, provide for building a balustrade on top of the concrete piers. Immediately east of the balustrade railing a curb will designate the line of the pedestrian promenade, 20 feet wide. East of the foot path there will be a magnificent driveway 150 feet wide.

Since the adoption of Ordinance 800, reserving Golden Gate Park for public use, the city has expended on this pleasure ground a sum slightly in excess of seven and a half million dollars. This covers a period of forty-two years.

A chapter in the recent annual report of the Park Commissioners of San Francisco is devoted to the history of water development in Golden Gate Park. The initial cost of supplying water for Golden Gate Park by the Spring Valley Water Works was 40 cents per 1,000 gallons, and that cost was gradually reduced to 23 cents per 1,000 gallons, but at the lesser figure the daily use in summer and autumn of a sufficient quantity of water to keep the mead-

ows, lawns and gardens alive was wholly beyond the revenue at the disposal of the board. To obtain something like an adequate supply, wells were sunk in the valley at the southeasterly base of Strawberry Hill.

The development of this source of supply and its enlargement under the direction of Superintendent John McLaren was gratifying to the public and the commissioners, but was only a partial solution of the problem of irrigation. Later on Commissioners A. B. Spreckles, who was for many years president of the board, and the late Reuben H. Lloyd, a member of the commission, resolved to test the capacity of the subterranean streams flowing from Strawberry Valley into the Pacific Ocean. An ample supply of water was found, and a windmill with a capacity of 30,000 gallons per hour was placed near the ocean. Through a twelve-inch pipe two miles in length to a reservoir 200 feet above ocean level the fresh water was pumped at an expense approximating one cent per 1,000 gallons. The experiment was so highly successful that another system of wells and a second windmill at the southwestern corner of the park were recommended. Samuel G. Murphy provided from his own means the sum of \$20,000 to erect the windmill. The Murphy windmill, the largest in the world, lifts 40,000 gallons of water per hour.

The Park Commission of San Francisco does not derive any revenue to speak of from these sources, known to park manage-



CHAIN OF LAKES
GOLDEN GATE
PARK

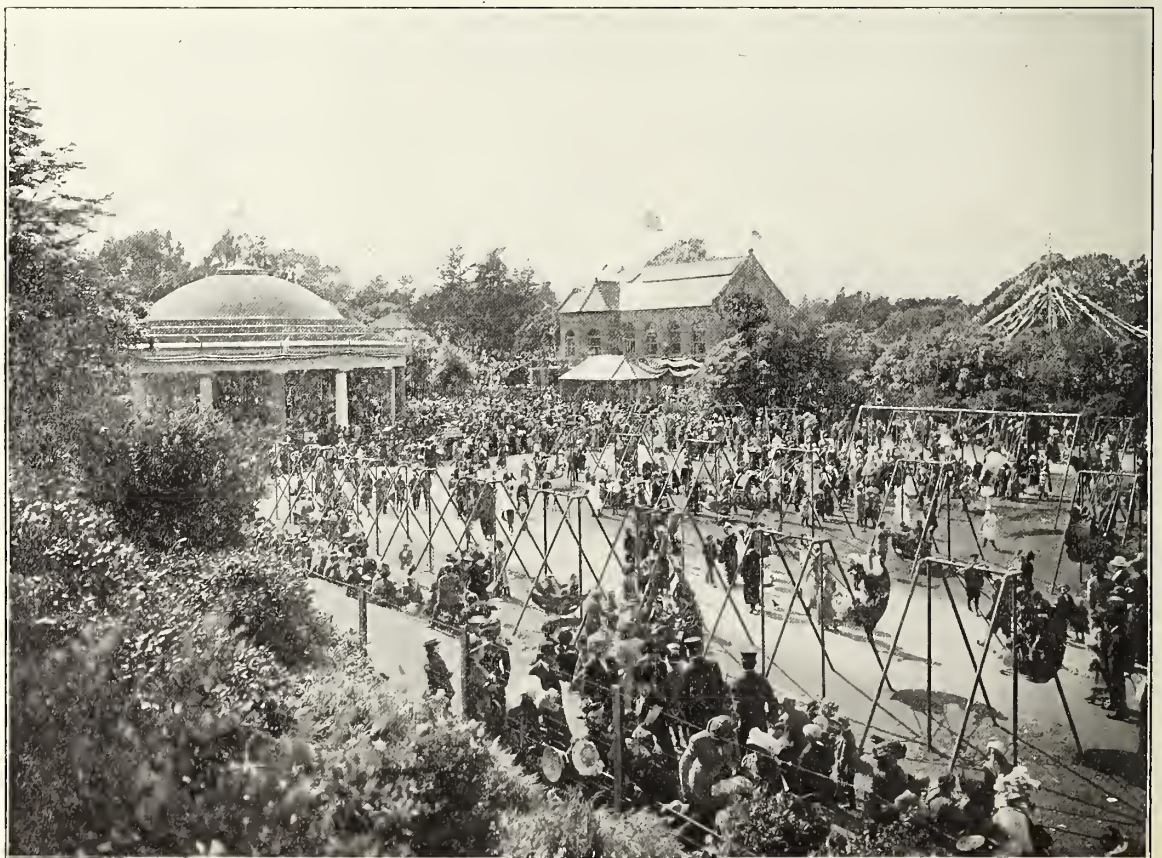
ment in the Eastern cities as concessions. The Japanese Tea Garden, a feature of Golden Gate Park that ministers at once to the delight and admiration of tourists, is a concession that pays only \$50 per month.

The chain of lakes across Golden Gate Park from northeast to southwest is an attractive feature of the reservation. One is impressed with the idea that nature bestowed the graceful curves of the inlet.

Seven small islands clad in verdure lend a charm to the view. In creating the lake effect, the excavation of a vast quantity of sand was required.

The area under the control of the Park

CHILDREN'S
PLAYGROUND
GOLDEN GATE
PARK.



Commission is 1,850 acres. The population of San Francisco (computing the number of inhabitants at 500,000) per acre of park acreage is 270.

Balboa Park: The area of Balboa Park is nine acres. These park grounds were formerly known as the House of Correction premises.

The area of Mission Park is 14 acres. Here are terraces, two tennis courts, a wading pool and an athletic field.

The recently acquired City Cemetery embraces 150 acres. The reservation was christened Lincoln Park. The scheme of improvement in the mind of the superintendent contemplates a driveway overlooking Baker's Beach to connect with the Presidio system of roadways. Magnificent views of the sea, the bay, islands and mountain ranges are here presented.

Mountain Lake Park, 20 acres in area, connects by Presidio Boulevard with Golden Gate Park.

Seal Rocks are under the jurisdiction of the Park Commissioners. The chief duty devolving upon the board is to prevent the killing of seals by fishermen and tourists.

Buena Vista Park commands from its crest a superb view of the coast range of mountains. The area of the park is 36 acres. Its elevation is 578 feet above tide.

Union Square comprises 2.60 and Portsmouth Square 1.29 acres.

Franklin Square is situated at Sixteenth street and Bryant avenue. Its area comprises 4.40 acres.

Other small parks and squares are: Bernal Park, 2.2 acres; Duloe Park, 4.36 acres; Alta Plaza, 11.9 acres; Pioneer

Park, 1.75 acres; Hally Park, 7.56 acres; Alamo Square, 12.7 acres; Washington Square, 2.24 acres; Sunnyside Park, 3.46 acres; South Park, $\frac{3}{4}$ acre; Garfield Square, 2.86 acres; Columbia Square, 2.52 acres; Hamilton Square, 5.64 acres; Lafayette Square, 9.46 acres; Lobos Square, 12.69 acres; Fairmont Park, 1.3 acres; McKinley Square, 14.4 acres; Jefferson Square, 11.29 acres; Jackson Square, 4.4 acres, and various unnamed lots and squares.

The latest annual report of the Commission, in addition to many interesting facts and beautiful illustrations, contains a complete catalog of the trees and shrubs and other flora and of the greenhouse collections.

James de Succa is secretary of the board and John McLaren is superintendent.

AN EFFICIENT TYPE OF LAWN SPRINKLER



THE BOSTON GIANT PARK SPRINKLER IN OPERATION ON BOSTON COMMON.

One of the most exacting duties of the summer season in large parks and cemeteries is the sprinkling and irrigating of the lawns. In a dry season it is a very difficult problem to provide the immense stretches of lawn with enough water to keep the grass and other vegetation in thriving condition.

Where the work is done by hand and small sprinklers, lawn sprinkling is a matter that requires individual labor and attention that makes it one of the most expen-

sive duties connected with lawn maintenance.

Various types of mechanical sprinklers have been utilized to assist in covering larger area and eliminating individual labor as much as possible.

One of the most powerful and useful of these is the "Boston Giant Park Sprinkler," that has been successfully used for several seasons in the parks of Boston and other large cities.

The need for an efficient sprinkler to save

the grass of Boston Common a few years ago first brought the Boston Giant sprinkler into prominence. It was decided that heroic action should be taken to save the 600 Common trees and to insure a healthy growth of grass that would withstand the driest summer season. Olmsted Brothers, the landscape architects, were directed to lay out the plan of campaign. The first problem was that of meeting the excessive dryness of the soil. Sub-surface irrigation appealed to the authorities as perhaps the only

possible solution. The results were discouraging. The authorities then turned their attention to a system of water pipes consisting of six-inch mains and four-inch laterals, furnishing a pressure of about 50 pounds at hydrants for 2½-inch hose. These hydrants were distributed all over the Common where there are trees or turf, and the public has seen the thorough way in which the grass has been watered by the revolving sprinklers. The first summer the sprinklers were moved every twenty minutes in the effort to sprinkle an amount of water at each wetting equivalent to one-half inch of rainfall, the statement having been made by the designer of the sprinkler that the application of one-half inch of water to soil similar to Boston Common will result in wetting it to a depth of three to four inches, sufficient to keep the ground moist three or four days in the summer months.

Mr. Olmsted, in expressing his views in "Landscape Architecture," says the general effect of repeated application of the sort appears to have been to raise the average total soil moisture contents appreciably throughout two feet in depth next the surface, thus benefiting the trees slightly and the turf largely. Mr. Olmsted, therefore, contends that it is not desirable to install any sub-surface irrigation there; that the present method of watering is highly successful for level surfaces and gentle slopes and that it can be extended to the steepest slopes if the turf is punctured.

The Boston Giant Park Sprinkler is designed for watering large areas, such as public or private parks, estates, polo grounds, fairways connected with golf courses, putting greens, baseball grounds, cemeteries and truck gardens. When the sprinkler is in operation the two spray arms slowly revolve, spreading the water uniformly in a fine, dense, rain-like spray



BOSTON GIANT PARK SPRINKLER.

over an area having a diameter of from 80 to 150 feet. The capacity of the sprinkler varies from 100 to 200 gallons of water a minute, according to the operating pressure, and is about fifty times that of an ordinary lawn sprinkler. The necessary water pressure is about 30 pounds per square inch, and at this pressure it requires only

40 minutes at each set-up to wet the soil thoroughly six inches deep. It sprays in such a fine mist that it does not flood or wash the grass roots, a most important feature.

One machine has an average capacity of two acres a day, and one person can easily operate three machines.

During the past four summers the Boston Giant Park Sprinklers have been in daily use on Boston Common—53 acres in area—where they were installed after other methods of irrigation were tried.

The Giant sprinkler is mounted on a substantial four-wheel truck and is fitted for a 2½-inch hose connection. There is also a similar device which requires a 1½-inch connection and which covers a corresponding smaller area when in operation. All of the metal parts are bronze and the net weight is 140 pounds, with a shipping weight of 200 pounds.

The Giant sprinklers are in use in the park systems of Boston, New York, Los Angeles and other cities, in Fairmount Park, Philadelphia, in the United States navy yards in Boston, Washington and Philadelphia, in many country clubs and golf clubs, the Niagara Falls Reservation, and in the cities of Buffalo, Rochester, Denver, New Haven and elsewhere.

The Boston Giant Park Sprinkler is made by the Spray Engineering Company, 201 Devonshire street, Boston, Mass.

COURT DECISION ON PROHIBITING INTERMENTS

One of the most important and far-reaching court decisions on the rights of a cemetery in the heart of a city to continue to make interments and to be free of taxes was recently handed down by the Supreme Court of Missouri in declaring an ordinance prohibiting interments in Union Cemetery, Kansas City, to be invalid.

The Circuit Court had upheld the ordinance, but on appeal to the Supreme Court the decision was reversed, and the city forbidden from enforcing the ordinance.

Public sentiment generally is reported to be against the cemetery, but its perpetual charter protects it and allows it to continue to do business. The cemetery has no perpetual care fund. The place is run down, grown up with weeds most of the time, and it is reported that they are now closing walks and drives and burying in them. There is no fence around it, and it is within four blocks of the new Union Station. Twenty acres fronting Main street are being held unused, free of taxes.

The question of maintaining old cemeteries in the city limits of large cities is of such importance throughout the country

that we will print the Supreme Court decision in full in this and succeeding issues.

The decision follows herewith:

The plaintiffs, the appellants here, who for convenience will hereafter be designated by the former appellation, instituted this suit in the Circuit Court of Jackson County to enjoin the respondents, who hereafter will be referred to as defendants, from enforcing an ordinance of the city, duly enacted by the Common Council thereof, and approved by the Mayor, July 14, 1910, forbidding burials in the grounds of the Union Cemetery, a corporation duly incorporated under the laws of this state, by a special act of the legislature, approved November 9, 1857.

In order to fully and properly understand the positions of the respective parties to this suit it will be necessary for us to set forth both the act incorporating the cemetery and the ordinance prohibiting further burials therein.

Said act of the legislature reads as follows:

"An act to incorporate the Union Cemetery Association.

1. That James M. Hunter, Edward T. Peery, Joseph C. Ranson, William R. Bernard, Robert J. Lawrence, and Milton J. Payne, and their successors forever, be, and they are hereby created a body politic and corporate, by the name and style of the 'Union Cemetery Association;' and by that name

have perpetual succession; sue and be sued; plead and be impleaded, defend and be defended in all courts in this State, and in like manner to have and use a common seal, which they may alter or change at pleasure to make such by-laws and regulation for the good government of the corporation, and the efficient management of its affairs, as they may deem necessary, provided, the same are not inconsistent with or repugnant to the public law of the land.

"2. In addition to the tract of land now held or owned by the said corporation for a cemetery or graveyard, they shall have power to buy and hold any number or acres, not exceeding one hundred and sixty, for that purpose; may lay off the same, or any portion thereof, into lots and subdivisions suitable for graves, vaults and monuments; may embellish the same with trees, shrubbery, and flowers, or cause the same to be done by any purchaser thereof, and lay out avenues and walks, and when so laid off and dedicated, shall be forever held by said corporation for the purpose aforesaid, and none other; said corporation may sell and convey any of the lots or sub-divisions in said cemetery for the purpose aforesaid, subject to such conditions as may be prescribed by its by-laws; and every right sold and conveyed shall be held and used by the purchasers thereof, for the purposes aforesaid, and none other, and shall not be subject to attachments or sale under execution, nor by order of any court, or be conveyed by the owner out of his family after any interments have been made in said lot.

"3. The officers of said corporation shall be a President, Secretary and Treasurer, who shall be elected every year, out of the said Board of Corporators, and said corporators may appoint such other officers as the board may deem needful, and prescribe the duties and terms of office; they shall also keep a faithful record of their proceedings, copies of which, certified under the seal of the corporation, shall be received as evidence in all courts in this State; the first election shall be held on the first Monday in May, A. D. 1858, and every year thereafter, at the City of Kansas. MIL-

ton J. Payne, President, and William R. Bernard, Secretary and Treasurer, who are now the chosen officers of said corporation, shall hold their offices until the first general election, and until their successors are duly elected, and as such officers, are empowered to do and perform all the acts and things imposed on them by this act, and all vacancies that may occur in said board shall be filled in such manner as the board may determine in their by-laws.

"4. The President shall, at the request of any two of the corporators, call together a meeting of the board, shall preside at all meetings, and do all other acts and things imposed on him by the rules and regulations of said corporation.

"5. All deeds for the conveyance of lots or subdivisions, or certificates of shares of stock in said cemetery, shall be signed by the President of said corporation, and attested by the Secretary, with the seal of the corporation attached, and the further certificate of the Secretary that the President executed the same shall be deemed a sufficient authentication of said deed in all courts and places whatsoever, and may be recorded with like effect of other recorded deeds.

"6. It shall be lawful for said corporation to hold any grant or bequest of money or property, in trust, and to apply the same, or the income thereof, under the direction of said board, for the improvement of said cemetery, or any portion thereof, or in the erection of any tomb or monument, according to the terms of any such grant or bequest.

"7. Any person who shall willfully destroy, injure or remove any tomb or monument, or any grave-stone placed in said cemetery, or shall willfully remove, destroy, cut, break or injure any fence around, or railing, fence tree, shrub or plant within the limits of said cemetery, or shall willfully ride or drive any beast at an immoderate gait, or shall ride or drive over any lot or grave, or shall turn loose any animal in said cemetery, or shall shoot or discharge any gun or other fire-arms within the said limits, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any justice of the peace, or court having jurisdiction of misdemeanors in the County of Jackson, shall be fined not less than five or more than fifty dollars, and such offenders shall also be liable to an action of trespass, before a justice of the peace or court of competent jurisdiction, in the name of the corporation, to recover all damages occasioned by such unlawful act or acts, and all money recovered either for a misdemeanor or for trespass, shall be appropriated in the reparation of the property injured or destroyed, and in the embellishment and improvement of the grounds, and in all such suits members of the corporation shall be competent witnesses.

"8. Any person who shall willfully open any vault or grave within the limits of said cemetery, for the purpose of unlawfully taking therefrom anything placed with the corpse therein, or who shall remove any body from said cemetery, for the purpose of dissection or any other unlawful purpose, or who shall knowingly receive any such body after the removal, and also all aiders and abettors, shall be deemed guilty of a felony, and upon conviction shall be punished by imprisonment in the penitentiary not less than one nor exceeding three years.

"9. Said cemetery shall be exempt from all taxes and assessments so long as the same shall remain dedicated to the purposes of a cemetery, and it shall not be lawful for any public road, street or highway to be ever opened through the cemetery grounds, without the consent of the corporators, nor shall the Legislature ever authorize the same.

"10. For the purpose of better effecting the objects contemplated by the seventh and eighth sections of this act, the said corporators shall have power to appoint a bailiff, whose appointment shall be confirmed by the County Court of Jackson County; said bailiff shall be authorized, in a summary manner and without process, to arrest and take before any officer or tribunal having cognizance of the offenses mentioned in said sections, any person or persons who shall have perpetrated, or be in the act of perpetrating, or be about to perpetrate any of the acts or offenses intended to be prohibited by said sections, to be dealt with according to law, and for that purpose may summon peremptorily, any person to his assistance.

"11. This act is hereby declared a public act, and shall take effect from and after its passage."

The ordinance complained of, is as follows:

"An ordinance prohibiting burials within certain limits of Kansas City, Missouri, and prohibiting the Board of Health from issuing any permits for burials within such limits."

"Be it ordained by the Common Council of Kansas City:

"Section 1. There shall be no burials or interments of any deceased person in Kansas City, Missouri, within the territory of boundaries included within the following limits:

"Beginning at the intersection of Thirty-ninth street and Woodland avenue; thence west to the State Line, thence north to the Missouri river, thence east along said river to Woodland avenue, thence south to Thirty-ninth street."

"Section 2. No sexton or any other persons in charge of any cemetery or burying ground within such limits shall receive the body of any deceased person for burial within such limits nor shall the Board of Health issue a permit for the burial of any body in any cemetery or burial ground within such limits.

"Section 3. All ordinances, or parts of ordinances, in conflict with this ordinance, are, insofar as they so conflict, hereby repealed."

The property and grounds of the cemetery, at the date of its incorporation, were located beyond the limits of Kansas City, but at the time of the passage of the ordinance in question, the limits of the city had been so extended that they embraced all of said property.

No complaint has been lodged against the sufficiency of the pleadings (except in reference to certain rights claimed by certain of the lot owners in the cemetery, which will be considered later) and for that reason we will, for the present, put the pleadings aside, with the observation that they sufficiently tender the various issues presented and discussed by the parties to the suit.

The evidence for the plaintiffs tended to prove that the cemetery embraces forty-nine acres of land, situated within the present limits of Kansas City. Forty acres thereof were purchased May 19, some six months prior to the incorporation of said cemetery, which subsequently was duly conveyed to that company.

On April 15, 1858, the cemetery, by its president, signed, acknowledged and filed with the clerk of the Circuit Court of said county a plat of said forty acres, entitled "Union Cemetery for the Cities of Kansas City of Westport," which plat, heretofore set forth, shows that only about one-half thereof was laid off into lots and subdivisions suitable for burial purposes at that time.

The fifteen acres, more or less, herein-after mentioned as unoccupied and unladen off land, fronting on Main street, is a part of said original forty acres.

Shortly after the incorporation of the cemetery it purchased two other small pieces of ground aggregating about nine acres, making its present holdings about forty-nine acres.

Said land is bounded as follows: On the north by Twenty-seventh street, on the south by Twenty-ninth street, on the east by ———, and on the west by Main street.

That on the date of the institution of this suit about fifty thousand burials had been made in said cemetery, and in the five years preceding the trial there had been about five thousand interments made therein, or about eighty-five per month.

In the year 1910, 60 per cent of the burials outside of the potter's field were made in ground newly purchased from the county for that purpose.

That many of the old settlers of Kansas City and Jackson County are buried therein, among them General George C. Bingham, William Gillis, Judge Samuel H. Woodson, the family of Colonel R. T. Van Horn, and many others, also about one thousand United States soldiers, most all of whose graves are marked by a monument or a marble headstone, some of which are very expensive.

Judging from the evidence introduced, and somewhat from my personal knowledge of the values of lands in that locality, and the expenses of burials, I would say that the present value of the lands of said cemetery is about \$500,000, and were it not for the presence of said cemetery the value thereof would, in all probability, be at least three times that amount; that the cost on the interments therein, including everything necessary thereto, is about five millions of dollars, and that the cost of the monuments and headstones is not much less than one-half of the latter sum—all included equal an outlay of probably seven or eight millions of dollars. (This is a rough estimate.)

The Union Cemetery is the only one embraced within the limits of the ordinance complained of, but there are, however, three other cemeteries within the corporate limits of Kansas City, namely, Elmwood, Mount St. Mary's and St. Peter's and St. Paul's.

Woodland avenue is the eastern boundary of the territory described in the ordinance complained of, and the cemetery of St. Peter and St. Paul lies only five hundred and twenty feet east of that line.

Mount St. Mary's Cemetery contains forty acres and has buried therein ten thousand bodies, with a monthly interment of about fifty. Elmwood contains about forty-four acres, and has buried therein twelve thousand, with a monthly interment of about forty-five, and St. Peter and St. Paul's contains about ten acres and has about two thousand burials and a monthly interment of only five or six.

The three latter cemeteries were opened up for burials in the order stated, namely, in the years 1887, 1872 and 1877.

That the comparative density of the population of the territory to these cemeteries was shown.

"In a strip of ground 600 feet wide contiguous to the exterior boundaries of these cemeteries the number of buildings with the length of the exterior boundary of each cemetery are as follows:

"Union Cemetery: 300 buildings; length of exterior boundary of cemetery, 5,560 feet; 5.3 buildings to each 100 feet of boundary; the buildings are practically all residences.

"Elmwood Cemetery: 231 buildings; length of exterior boundary of cemetery, 5,400 feet; 4.3 buildings to each 100 feet of boundary; 80 per cent of the buildings are residences.

"St. Peter and St. Paul's Cemetery: 377 buildings; length of exterior boundary of cemetery, 2,480 feet; 15 buildings to each 100 feet of boundary; the buildings are mostly residences."

There are twelve or fifteen acres of the ground not yet encroached upon by graves in the Union Cemetery, which, in fact, is the bone of contention in this case, and were it not but for this fifteen acres, this case would never have been here.

There is also in different parts of the cemetery where lots have been sold vacant and unsold ground suitable for graves. There is also, in lots already sold, unoccupied room for 3,600 graves, the vacant spaces in these lots representing, at present price, a value of \$35,000 or \$40,000.

The inspiring cause for the passage of the ordinance is not difficult to discover. Certain persons living or owning property in the neighborhood of the cemetery, and particularly south of it, deplore its presence there because they regard it as a partial obstruction to the progress of improvement and growth in the direction of their own holdings, and therefore as preventing them from realizing the additional values which they think their own property would possess if the cemetery was not there. They also do not like it because the prop-

erty is, by provisions of section 9 of the charter of the association exempt from taxes and assessments, and because by the same section the opening of any street, road or highway through the ground is forever prohibited, without the consent of the incorporators. They think streets ought to be opened through the property, and they are also irritated because it has been held by the courts, in obedience to the mandate of a legislative act, that taxes cannot be assessed against the property; these people think that the property ought to be taxed like other property, notwithstanding the legislature has declared otherwise. Many of the principal witnesses for the defendant were persons of this class.

That the ordinance complained of is unreasonable and oppressive and was not enacted for the health, comfort or well-being of the city, but was passed at the instigation of and for the benefit of persons residing or owning property in the neighborhood of the Union Cemetery, and particularly south of it, who believe and contend that its presence obstructs and impairs the progress of the city, delays improvements and retards its growth in the direction of their holdings, and thereby prevents them from realizing the additional values which they think their property would bring if the cemetery was not there,

also wish the cemetery abated because section 9 of the act incorporating it exempts its real estate from all taxes and assessments, and because the same section forever prohibits the opening of any street, road or highway through or across said lands without the consent of the incorporators. That they caused the City Council to believe that streets should be opened through said property and that the same should be taxed and assessed for benefits received by improvements made by the city, just the same as other property in that vicinity is taxed and assessed, notwithstanding it is expressly exempt therefrom by the act of incorporation.

There were many witnesses who so testified at the trial; also that they presented petitions to the Common Council embodying those views and stating that the "contained use" of said property for cemetery purposes was greatly detrimental to the property interests of that section of the city; that "the expansion of Kansas City is injured by the fact that Union Cemetery lies exactly in the path of the city's greatest development. Its continued use as a cemetery, in the heart of the city, is not only against property values, but against public welfare, as recognized in every community."

(To be continued.)

OFFICIAL COMMUNICATIONS

H. S. RICHARDS, Chicago, President



AND CONTRIBUTIONS

J. J. LEVISON, Brooklyn, N.Y., Sec.-Treas.

A. A. P. S. EXECUTIVE BOARD MEETING.

At the meeting of the Executive Board of the American Association of Park Superintendents, held at Hotel Astor, New York City, March 9, there was a large representation of local members and visitors, and the meeting, in the absence of President Richards, was presided over by Vice-President W. S. Manning, of Baltimore, Md.

Secretary Levison was authorized to send out notices to all members, notifying them of the proposed changes in the constitution, in accordance with the resolutions passed upon at the last meeting in Denver and recorded in the Fifteenth Annual Proceedings of the Association, on page 35.

The date of the next annual meeting was decided upon to commence on Monday, August 24, at 3 p. m., and terminate on Thursday, the 27th. In this connection a committee consisting of Messrs, Merkel (chairman), Austin, Beatty, Burgevin, Coldwell, Haible, Zartmann and Levison was selected by the chairman to take care of all details and arrangements for the entertainment of the members.

A transportation committee consisting of Messrs. Richards, Merkel, Wirth, Paul, Stinhauer and McLaren was appointed by the chairman and suggestions were made that the matter of making this committee a permanent one be brought to the attention of the association at its next annual meeting. It was the intention in selecting this committee to represent every section of the country.

It was decided that at the next annual meeting the association be urged to select its Executive Committee from members located as near as possible to the meeting place of that year.

The matter of charging for publications issued by the association was discussed in view of the fact that there has been an unusual demand for special copies by members and outsiders. It was decided to charge cost price for all copies outside the one regularly sent to each member of the association.

Five new applications for membership were approved, two resignations accepted and two appeals for a change from special

to active membership were tabled until the annual meeting. The resignation of John W. Dunbar was not accepted and deferred for consideration at the next meeting.

It was decided to have a very simple form of badge for the next annual meeting.

Commissioners Ward and Eliot, in person, and Commissioners Ingersoll and Whittle, through their representatives, all of New York City, extended their hearty welcome to the members and promised every possible assistance in providing automobiles and other facilities for viewing the parks in the city of New York. The mayor of the city of Newburgh was also very cordial in his invitation and promised to extend every possible courtesy in his power.

In view of the fact that there are many members still in arrears and that the treasury needs their remittance, the secretary was asked to send out a third notice in the form of a letter urging the members to pay at their earliest possible convenience.

The business of the meeting was transacted with very little loss of time and the

social features were enjoyed by all present.

The following were among those present: The Mayor and Commissioners Coldwell and Smith, of Newburgh; Commissioners Ward and Eliot, of New York City; Colonel Austen and Messrs. Manning, Green, Zartmann, Beatty, Burgevin, Haible, Merkel, Walsh, Paul, Kelsey, Levison and Grassau. J. J. LEVISON,
Secretary.

ASSOCIATION EMPLOYMENT BUREAU.

Wanted: A position in some line of landscape work offering good futurity; four years' experience at surveying, etc., previous to four years' course at Pennsylvania State College, School of Landscape Gardening. Address "B. X.," care Secretary Levison.

WOODLAND TREES IN THE PARKS.

J. J. Levison, Secretary and Treasurer, American Association of Park Superintendents. Dear Mr. Levison: I am very grateful to you for printing my letter in this issue of *PARK AND CEMETERY* and for the information contained in your reply. I have long been of the same mind as yourself regarding the need of undergrowth and mulch in the preservation of our park trees. Unfortunately, however, a large area of the parks have already been opened up, the undergrowth all removed and sod established, and these portions of the parks are needed by the people who throng to these parks.

The present problem that we have to consider is: "What are the best methods of preserving the forest trees standing in these cleared areas?" We cannot let these areas go back to their original condition and yet we would like to preserve the old forest trees.

I shall be very grateful to you for any information you may be able to give me.

FRED J. LAZELL,

Dept. of Parks and Public Property.
Cedar Rapids, Ia.

* * *

Fred J. Lazell, Cedar Rapids, Ia. Dear Mr. Lazell: I want to acknowledge your letter of the 18th inst. and possibly add one or two more thoughts on the subject of "What are the best methods of preserving the forest trees standing in these cleared areas?"

Under the conditions mentioned, I presume it will be practical to suggest that the older trees be fertilized with well-rotted manure and well-decomposed leaf mold mixed with black loam. Such fertilization should extend about eight inches or more in the ground and to a distance away from the stem of the tree equal to the spread of the branches. In applying this fertilizer the

A member who is superintendent of parks in a metropolitan northern city wishes to change position on account of political interference with his work. Trained in horticulture, planning and development of parks; has done important work of park development, and is thoroughly familiar with park work of every character; can furnish highest references as to ability to take charge of large city park system. Address "Politics," care Secretary Levison.

NOTICE.

Mail addressed to Bernard F. Rifkin, Reading, Pa., has been returned to me by the Reading postoffice on several occasions, and I would therefore ask you to kindly insert a notice in your columns calling upon Mr. Rifkin or his friends to furnish his correct address to the Secretary.

sod will naturally have to be lifted up and replaced.

This, however, is an expensive process and cannot be recommended for general use, and I must, therefore, repeat that if you can re-establish the natural forest conditions, you will find it to be not only the easiest method, the least expensive method, but in the long run also the most beneficial method for all trees on the grounds. What I mean by re-establishing the forest conditions is to stock the ground with a large number of trees, so that in as short as possible a time you can have the crowns of these trees meet and the ground underneath entirely shaded out. As soon as this condition has been reached you already have the conditions necessary for a natural forest. From that moment on the soil will begin to change for the better. The fallen leaves will decay rapidly, change into humus and enrich the soil from year to year. The older trees will then also be thereby benefited. Of course, it will be important to select trees for such underplanting as will stand the shade produced by the older trees above. Hemlock and beeches are generally excellent species for that purpose.

The wholesale dying of trees which were formerly accustomed to forest conditions may often also be attributed to other causes, such as overthinning as well as to the insects and disease, all of which can only be judged best by a personal examination on the grounds. I have seen many instances in this locality where fine specimen oaks growing under woodland conditions suddenly began to die because these woodlands were heavily thinned and the sun and the wind allowed to dry up the remaining trees and the soil around them.

I doubt whether I can say much more to advantage on this subject without knowing a good deal more about the premises, but trust that the few suggestions have already been of some assistance to you and

that you will get many more valuable suggestions from our fellow members.

Very truly yours,
J. J. LEVISON, Secretary.

* * *

In the last issue of *PARK AND CEMETERY* we read the letter of Fred J. Lazell, in which he asks the brethren for advice in saving his woodland trees.

This thinning out of the forest and raking off the mulching (making a grove, as it were) will always result in disappointment unless we correct certain other conditions.

Right here it becomes necessary to study the characteristic difference between a woodland tree and one growing in isolation. The woodland tree is tall and proportionately weak of trunk, because this tree was striving for more light, and the surrounding trees protected it from storms, so that there was no necessity for producing a strong trunk. The root system is also much different with the woodland tree. These roots are all found growing near the surface, because here, in the leaf mould, is found the greatest amount of plant food and moisture. These conditions are just the opposite with the isolated tree; it must adapt itself to conditions of storm and drought, thereby growing strong of trunk and deep rooted.

Now, when we rake off the leaves and leaf mould, we rob these trees of their supply of food and moisture and practically lay the roots bare; then if we thin out one-half the trees, we subject the remaining trees to more violent storms than their physical condition can withstand, and the result of these trees being swayed and bent just a little farther than is good for the tissue will result in a rupture of the sap cells, which generally is first noticed in a dead top or possibly a side branch.

Having made several good groves out of the most dense woodland, I can safely recommend the following treatment: After taking out the weakest trees and raking off the roughest of the leaves and sticks, apply four inches of good top-soil over the entire surface. Cultivate with harrow or disk for one whole season before sowing down for lawn. This will make a proper bond with the sub-soil. Where the remaining trees are proportionately weak of trunk for their height it is well to cut them back severely. Always remember to do this by gradation, *i. e.*, don't permit one tree to stand out thirty feet higher than its neighbor. Don't be afraid of this cutting back. I have cut slender trees in half, and the new head, in four years' time, was better than I thought possible in an oak tree.

Add four inches of good top-soil, as mentioned above, if you would have a lawn that is worthy of the name, and this top dressing will help the trees to adapt themselves to the new condition.

WM. G. MACLEAN,
Madison, Wis. Supt. of Parks.

PARK NEWS.

The report of the committee named by the Commercial Club of Kansas City, Mo., to investigate and recommend a plan for park improvements near the new Union station recommends the taking of all the land included in the so-called Kessler plan, extending from Main street to Central, and from the station plaza to Penn Valley Park. In addition the committee recommends the acquiring of the two blocks of land lying between Twenty-fourth and Twenty-sixth streets and Central and Broadway.

William Pitkin, Jr., landscape architect, of Rochester, N. Y., is planning the improvement of a public park in Toledo, O., to be located in beautiful Delaware Creek valley, opening on the River road just south of the city lines. "With its beautifully wooded slopes and ravines, lagoons and running streams, banked with wild flowers, it will be one of the most beautiful small parks in America," says Mr. Pitkin. R. B. Wiltie has presented the land to the city for this park. The donation comprises about thirty-seven acres.

The Board of Water Supply of New York City wants 1,250,000 little evergreen trees to plant along the forty miles of shore on the Ashokan and Kensico reservoirs in the new Catskill water system. It has asked contractors to bid on supplying the trees and setting them out within three years. They will be expected to replace trees that die. The trees are to protect the water along the thousand foot strip that the city owns on the shores of the reservoirs. The board wants evergreens because leaves from deciduous trees are likely to turn the water brown in the fall. The board grew 1,000,000 little evergreens in its own nurseries and set them out last year, and 500,000 more which it bought from the State Conservation Commission.

Governor Dunne has approved the report of the Illinois Park Commission relative to the additional purchase of land for the Starved Rock State Park, and has also given his approval to recommendations made by the commission relative to the new improvements for which plans have been prepared. The work on the sewers and tile drainage has started. Bids have been invited on the construction of a new comfort station to cost in the neighborhood of \$3,000; for an auditorium and dancing pavilion; for the construction of a new garage; for the bathing privilege in an artificial lake, and for the construction of a pumping station and a water supply system.

A petition, signed by a large number of residents of Oak Cliff, Dallas, Tex., asking

that the City Park Board purchase a part of Lake Cliff Park, Oak Cliff, was presented to the City Park Board. It has been offered to the city for \$30,000. It comprises nineteen and one-half acres, in which is located swimming pool and club buildings. W. R. Tietze is park superintendent.

A. U. Morrell, of the firm of Morrell & Nichols, the Minnesota landscape gardeners, was in Council Bluffs, Ia., recently and started on the preliminary work of arranging working plans for the development of the Nathan P. Dodge Memorial Park.

The great Cincinnati Zoological Park has an unusually good representation of the family of zebras, of which we picture here a typical specimen. There are three species of this interesting mammal, and they are rapidly approaching extinction. The true or mountain zebra has the body and legs striped but the belly plain. Burchell's zebra has body and belly striped and legs plain, or nearly so. Grevy's zebra, shown in our illustration, is the most numerous, and has body, belly and legs striped, and has long ears fringed with hair. The stripes are also narrower and more numerous on this species.



ZEBRAS IN CINCINNATI ZOO.

From Annual Reports.

The annual report of the Park Commissioners of Charleston, S. C., shows extensive improvements to have been made at Hampton Park during the past year. A new greenhouse has been erected, a fountain has been placed in the Sunken Garden, a 100-candlepower ornamental electric light has been installed at the intersection of the Rose Garden with the Sunken Garden, and galvanized iron trellises have been placed the entire length of the east and west sides of the East Rose Garden for the climbing roses. Three turnstile gates have been placed on the Moultrie side of the park. Reports are also made of the care of White Point Gardens, Washington and Cannon parks, Hampstead and Wragg malls and the various shade trees and grass plots throughout the city. The areas of the city parks are: Chicora Park,

318 acres; Hampton Park, 317 acres; Colonial Commons, 9 acres; White Point Gardens, 7 acres; Marion Square, 6 acres; Hampstead Mall, 4 acres; Cannon Park, 3 acres; Wragg Square, 1 acre; Wragg Mall, 1 acre; Washington Park, 1 acre; Lucas Market and Keystone squares.

The forty-second annual report of the Fairmount Park Art Association of Philadelphia tells of much work of this useful organization. The Fairmount Parkway, on the successful completion of which so much depends, is progressing at a rate which, when due consideration is given to the extremely conservative policy which the city has felt compelled to observe during the past year or two, may, on the whole, be regarded as fairly satisfactory. The opening of the parkway from Sixteenth street

to Seventeenth street has been authorized and 222 buildings within its lines, west of Nineteenth street, have been razed. The growing appreciation of the need of effective grouping in the location of monumental memorials is only one phase, though a most important one, of the progress of the city planning movement which is making such gratifying progress, to the promotion of which the energies of this association have been largely devoted during recent years, and in connection with which it is fairly apparent that much, if not most, of its work is to be done in the future. In estimating the extent of the service that the association is rendering, therefore, it must be remembered that the objects which appeared to its founders to be of first importance, namely, the presentation to the city of detached and individual works of art, to be placed wherever places

Tarvia

*Preserves Roads
Prevents Dust~*



For Cemetery Roads

IN 1910 and 1911 Kittanning Cemetery at Kittanning, Pa., used "Tarvia X" in the construction of its roadways.

The Engineer for the Cemetery, Mr. E. E. Lawson, writes as follows:

Kittanning, Pa., Oct. 20, 1913.

"I am pleased to say that the driveways are in perfect condition—dustless, weedless, and almost noiseless and very pleasant to use, either as foot-walks or driveways. The directors of the Cemetery and the people of the community are very much pleased with the new driveways, which add much to the beauty of the Cemetery."

Cemeteries in which the driveways are to be used as foot-walks find that Tarvia is excellent for that purpose, as it will withstand the heavy traffic incident to the transportation of monuments, and yet always furnish clean footing for pedestrians. The surface drains instantly, and even immediately after a storm provides satisfactory walking. Tarvia also prevents ravelling by water on steep grades. The saving in the maintenance balances the slight increase in cost as compared with plain macadam.

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could be found for them, but never with reference to their use as features of any comprehensive scheme, have largely been supplanted, if not to a considerable extent supplanted, by consideration for the larger aspects of the subject which the need of such schemes, comprehensive enough to include not only certain selected localities, but the city itself, inevitably suggests. It is a source of much gratification to your board that the prominent part which a dignified and attractive treatment of the city's water fronts, and especially the redemption and beautification of the banks of the Schuylkill below Fairmount, must play in any adequate system of civic development, is at least so generally recognized as to figure prominently in all current discussion of this subject. Edgar T. Stotesbury is president of the association, and Leslie W. Miller, 320 S. Broad street, secretary.

THE COVER ILLUSTRATION.

A very massive and imposing iron fence and gateway entrance for parks and playgrounds is shown on the front cover of this issue. It is a print from a photograph of the entrance gates and fence erected to Owls' Nest Park, Madison Road, East Walnut Hills, Cincinnati. The readers of *PARK AND CEMETERY* interested in this design of fence and gates can get specifications and blueprints by writing The Stewart Iron Works Co., Cincinnati, O., who have erected the iron fences enclosing many of America's largest and most beautiful parks.

The product of the great Stewart factory is known for its high quality and the efficient service rendered by their engineering department is of much value to park commissioners contemplating the erection of an iron fence. With floor space of approximately 350,000 square feet, and every modern factory equipment, they are in a position to handle orders promptly, even for special designs to be made up from architects' drawings.

This is the season of the year when the improvement of parks should be considered, and this part of the planning should be given first consideration.

MORE OR LESS PERSONAL.

S. Herbert Hare, of the firm of Hare & Hare, landscape architects, Kansas City, Mo., is giving a series of ten lectures at the University of Kansas on landscape architecture. The lectures are given each Thursday and are attended by about sixty students, mostly from the botany, architectural and art departments.

The American Association for the Advancement of Science is a national body of several thousand members, practically all of whom are engaged in scientific work. At each annual gathering of the general association a few of the members are selected for fellowship in the association in recognition of their scientific work. At the recent annual meeting in Atlanta, How-

ard Evarts Weed, of Portland, Ore., was elected a fellow of the association.

Borough President Douglas Mathewson, of the Bronx, has appointed John G. Bors-tede as Commissioner of Public Works for the Bronx. Mr. Borgstede is president of Ferncliff Cemetery, New York.

Louis Chaudoin has been appointed sexton of Oak Grove Cemetery, Hillsboro, Ill., to succeed J. A. Page, who served in that capacity for ten years.

At recent annual meetings of cemetery associations the following officers were elected:

Viola Cemetery Association, Viola, Minn.: Mrs. M. Campbell, president, and Mrs. R. Palmer, secretary. Clarence Wooley was appointed caretaker of the cemetery.

Mishawaka Cemetery Association, Mishawaka, Ind.: Mrs. Rose Grimes, president, and Mrs. George Shobe, secretary.

Fair Plains Cemetery Association, Grand Rapids, Mich.: William K. Munson, president, and A. W. Morgan, superintendent.

Altona Cemetery Association, Altona, Ill.: President, A. L. Roby; secretary, F. D. Anderson.

CEMETERY NOTES

The New England Cemetery Association announces that its annual midsummer 'outing' will be held in Barre, Vt., June 16 and 17, and Alex Hanton, superintendent of cemeteries in Barre, the Barre Board of Trade, the Granite Manufacturers' Association and the Quarry Owners' Association have started their plans for entertaining the superintendents. It is expected that a delegation of 100 cemetery men will come to Barre. The entertainment features here will resemble the reception accorded the monument retailers on the occasion of "Barre Day" last August. Special accommodations will be provided for transporting the superintendents to the quarries. There will also be automobile accommodations for trips to the different cutting plants. Possibly there will be a barbecue at some of the parks near the city. Committees from the local organizations are co-operating heartily on the entertainment arrangements.

The city of Denver was sustained in its order prohibiting burials in the old Hebrew and Mount Cavalry Catholic cemeteries east of Cheesman Park by a decision of Judge Sheafor, of Colorado Springs. The decision was the result of the injunction suit brought by Augustus J. Bradleigh to restrain the city from enforcing the prohibition. The Jewish people agreed to the edict of the city, but Bradley introduced his case to test the right of the city to forbid burials in the Catholic cemetery. A bill of exceptions will be filed by Bradley's attorneys and the fight may go into the Supreme Court.

Judge Weir, of the Superior Court at Indianapolis, recently denied the petition for a receiver for the Cemetery Company filed by Willard E. Cary, a stock salesman, and three stockholders of the company. The Cemetery Company and William F. Heinig, its promoter, were named defendants in Cary's petition. In the opinion handed down by Judge Weir he rules while the company may have been too liberal in its grant of stock, bonds and cash to

Heinig, the cancelling of that contract places the company on a substantial financial basis. It was shown at the beginning of the hearing that the assets of the company were \$74,583, with liabilities of \$83,203.75, but the return of \$15,000 worth of stock to the company by Heinig brought the liabilities down to \$68,000. In a review of the evidence Judge Weir pointed out that Heinig had secured executory contracts for real estate east of Irvington for \$34,450, and that on October 15 he entered into a contract with the company whereby he agreed to turn over the land for \$150,000, of which \$80,000 was to be in stock, \$30,000 in bonds and \$40,000 in cash. He was also to promote the company, supervise the necessary construction and receive a commission of 20 per cent on the stock sold. The stock sold represented 19,770 shares, on which \$55,000 was realized. Of this amount Heinig received \$13,000. The suit was originally brought by Cary, who wished a receiver to protect a claim of \$2,196 against the company for the sale of stock.

The annual report of the Cemetery Commissioners of New Bedford, Mass., notes that the past year has been marked with a notable improvement in the reconstruction of roadways and general expansion of the cemeteries. Particularly is this in evidence in the completion of the new entrance to Pine Grove Cemetery; the new macadam avenue leading from the entrance in a beautifully curved line and following the contour of the land around the first group of tall pines and intersecting the macadam avenue in the south section; the large area of main avenue in both Rural and Oak Grove cemeteries, which has been rebuilt with macadam. In opening up a new cemetery, which is what the board is now doing at Pine Grove, substantial progress has been made during the year past. A massive stone entrance has been permanently constructed covering 205 feet frontage. The land receding from this to the cemetery proper for a distance of nearly 600 feet,



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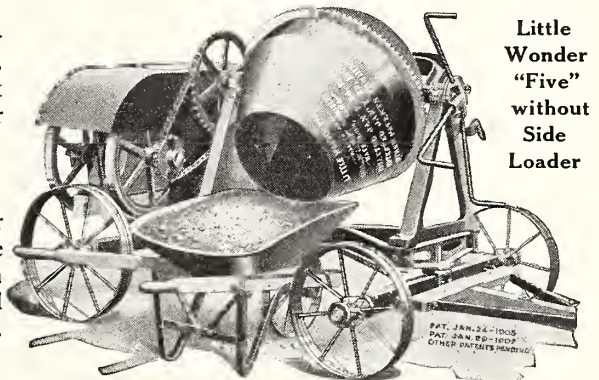
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which was in a wild and wooded state, has been thoroughly grubbed, dug over to a regulation depth, all obstructions removed, graded and seeded and attractively embellished with trees, shrubs and evergreens. The growing popularity of perpetual care for lots, so strongly advocated by the board, is becoming more apparent. The number of lots placed in perpetual care in 1913 was 66. Additional deposits were made to 26 lots. The total number of lots now in perpetual care is 1,444. The amount deposited during the year was \$9,450, making the total amount of the perpetual care fund \$173,176.62. In Rural Cemetery the general work of maintenance has been performed, while land constituting three new sections has been dug over and prepared for burial use under the careful management of Acting Superintendent H. E. Thomas and Sexton Nelson L. Pike.

New Cemeteries and Improvements.

Oregon City, Ore., was one of the first towns to be established on the Pacific coast, the original plat of San Francisco being filed for record in Oregon City. It is today a thriving manufacturing town of 10,000 population. The old cemetery is now well filled and the City Council has recently purchased a tract of fifteen acres adjoining the old tract and will now establish a modern cemetery with perpetual care features. Howard Evarts Weed, of Portland, has been engaged to make the plans and supervise the construction of the new addition.

A new \$100,000 cemetery is to be started as soon as the weather will permit the improvement of an eighty-acre slice in Gary, Ind., purchased for this purpose by Indianapolis investors several years ago. The site contains eighty acres and is located on Broadway, south of Forty-fifth avenue. Robert Snapp, of Indianapolis, is the principal owner of the land. The land was bought about two years ago and a company was formed at that time. About \$500 was spent for shrubbery, but as soon as this was planted the construction stopped and nothing further was done until the company was reorganized this spring. This is the third cemetery to be laid out in or around Gary in the past few years. There are now the Oak Hill Cemetery on Fifty-fifth avenue, the new Calvary and Woodmere cemeteries at East Gary, and the present one, which is not yet named.

Incorporated: Mt. Carmel Cemetery Co., Mt. Carmel, Ky., by F. C. Coulter, Charles Marshall, J. P. Lukins and others.

The Ladies' Committee of the City Cemetery Association, Austin, Tex., is furthering the parking of the new addition to the City Cemetery.

Under the direction of the City Cemetery Association, Vicksburg, Miss., the main drive is being improved and drains will be laid.

Plans for the immediate improvement of Oakland Cemetery, Waycross, Ga., are before the Park and Tree Commission. H.

Lester Marvil, chairman of the Committee on Cemeteries, prepared the plans.

The present cemetery of Pike, W. Va., is proving inadequate to the needs of the city and the Dallas Cemetery Association has purchased a tract adjoining. The work of grading and improving the land will be begun at once.

Work will be begun at once on the new memorial stand in Riverside Cemetery, Martins Ferry, W. Va.

sociation, Muscatine, Ia., by Rev. J. I. Greiser, Rev. F. J. Leonard and others.

The city of Vancouver, Wash., has voted to go out of the cemetery business and the site for the new cemetery recently purchased will now be offered for sale. A private company, headed by the leading undertakers, will soon lay out a modern cemetery as the best solution for the problem which has stirred up much strife in the city for the past two years.



GERMAN DESIGN FOR CROSS-TABLET.

A new plat has been made of Hazelwood Cemetery, Springfield, Mo., by the cemetery committee, composed of G. D. Morgan, J. P. Ramsey and H. L. Green.

Richmond Chapter, United Daughters of the Confederacy, Richmond, Va., passed resolutions endorsing the efforts now being made by the Hollywood Cemetery Company to purchase from the city the Clark's Spring property in order to enlarge the cemetery. Mrs. N. V. Randolph is president.

Incorporated: St. Mary's Cemetery As-

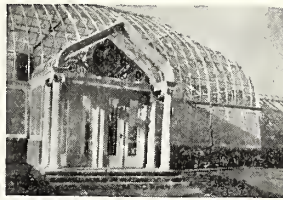
The above illustration shows a small monument from a German art exhibit. It is a simple little tablet of Labrador granite with a new decorative feature in the manner in which the cross is introduced in the little recess in the die. It was designed by L. Fuchs, and is one of the prize designs selected in a competition of German artists and architects and executed in Germany exclusively by the Association of German Granite Workers. We are indebted to this organization for permission to reproduce it in this country.



HIGHLAND PARK GREENHOUSES, ROCHESTER, NEW YORK

They are called the Lamberton Memorial houses having been given to the city by Mrs. Mary Starbuck as an appreciation of her brother, Alexander B. Lamberton, who is president of the Board of Park Commissioners. In the vestibule gable there is a beautiful bronze medallion of Mr. Lamberton with a suitable description.

The group of three houses in front are used entirely for show houses and are always open to the public both day and night. Even as



Rochester has gained its merited name as The Flower City, equally has it won recognition for the unusual beauty and completeness of its greenhouse displays.

Great credit is due to the Superintendent of Parks, Mr. C. C. Laney, and his most able assistant, Mr. John Dunbar.

Will gladly send you other views and a complete description of the houses—all of which are Iron Frames.

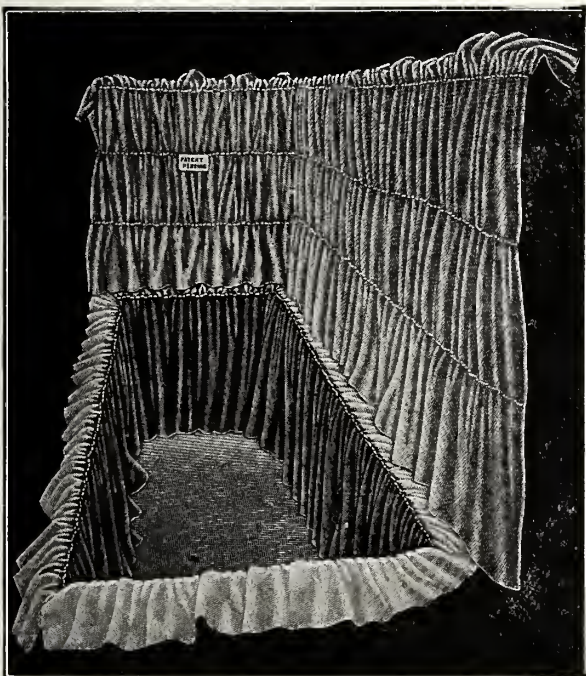
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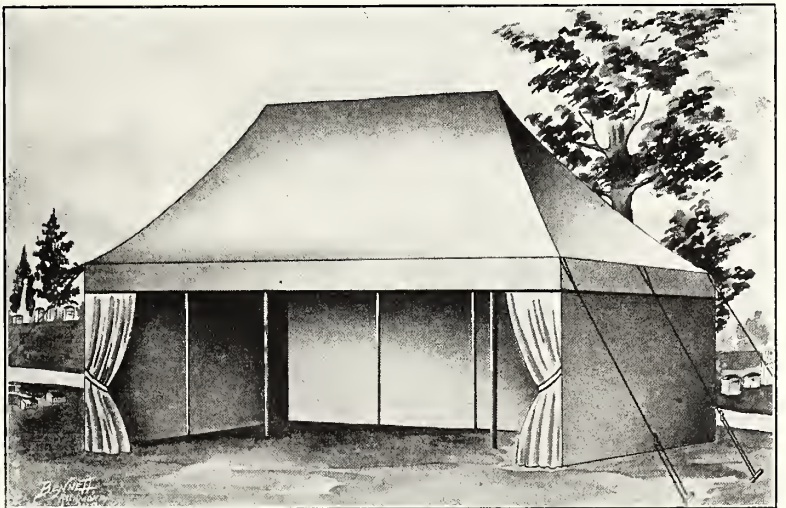
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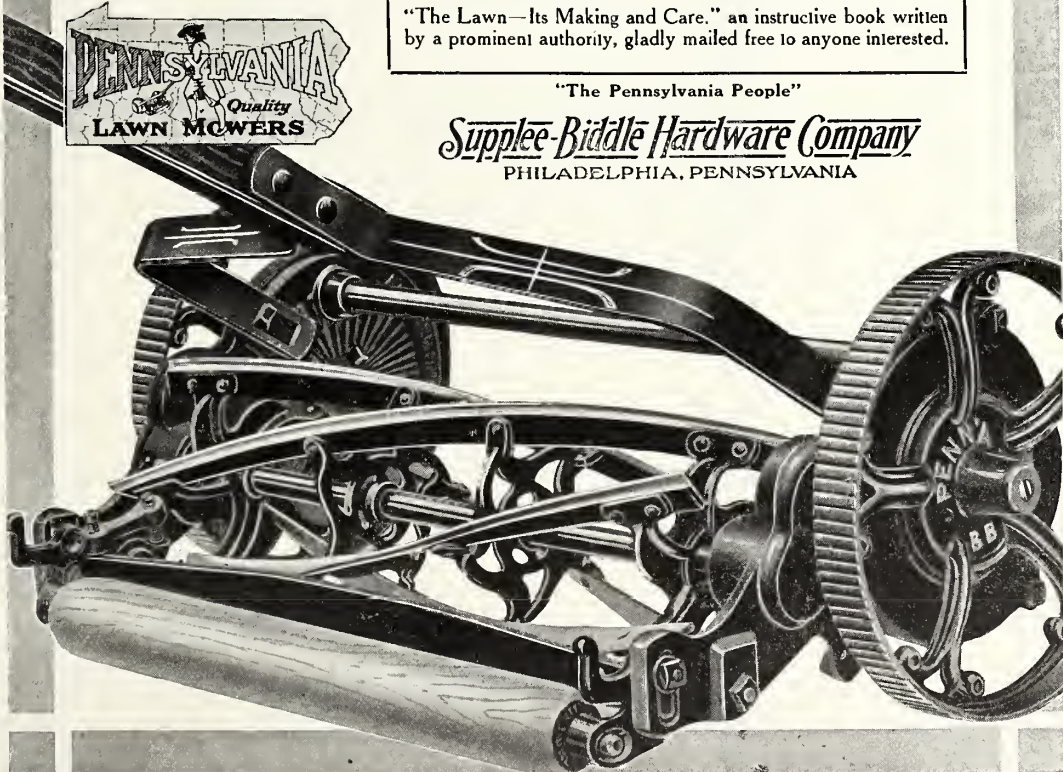
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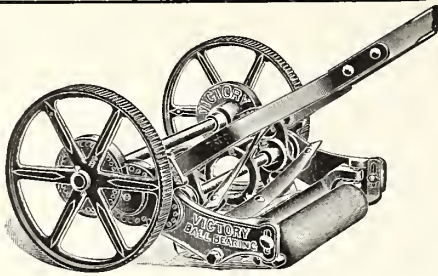
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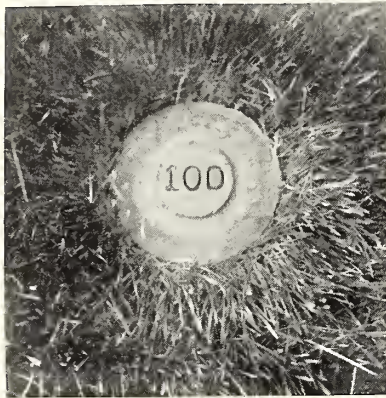
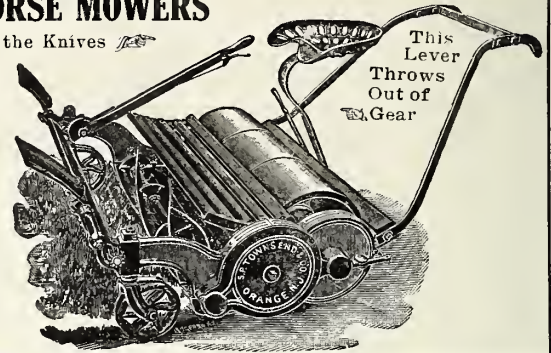
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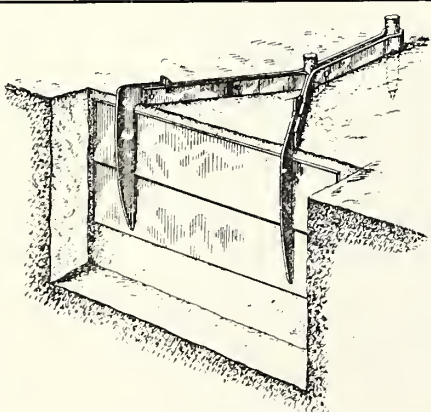
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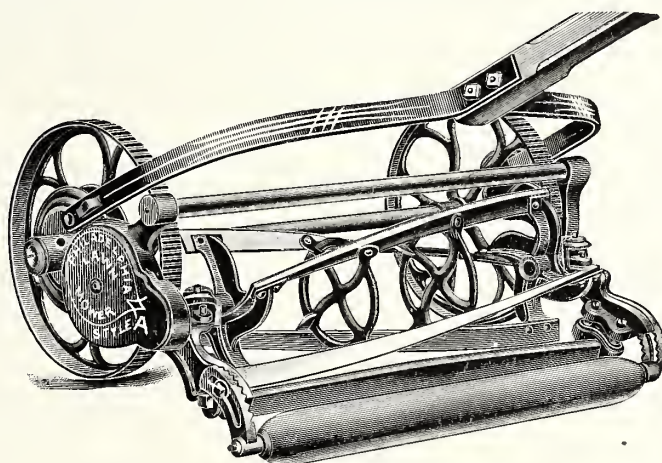
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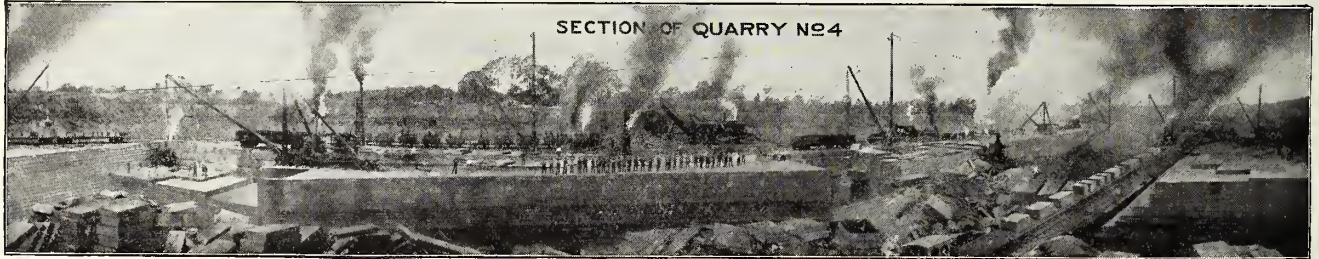
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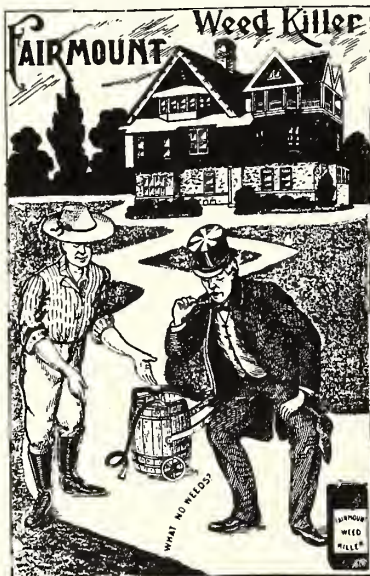
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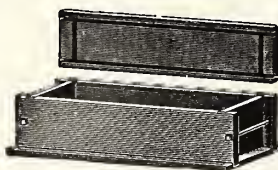
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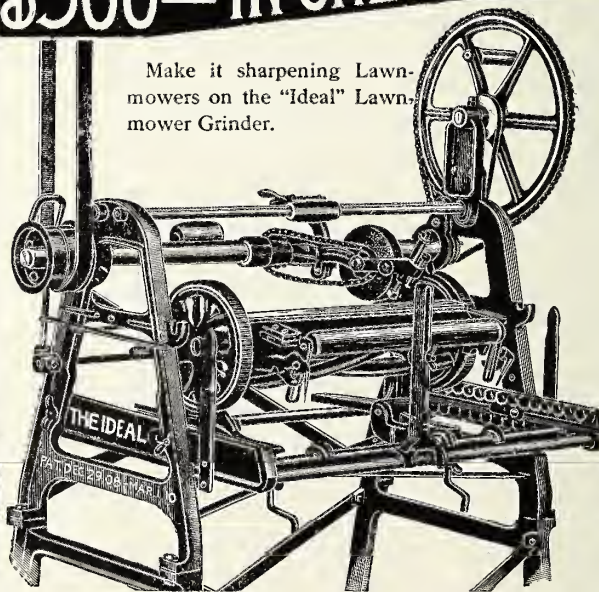
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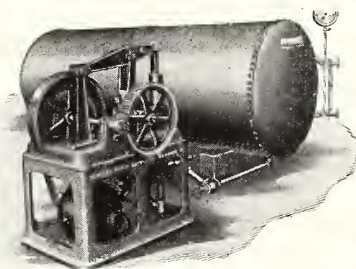
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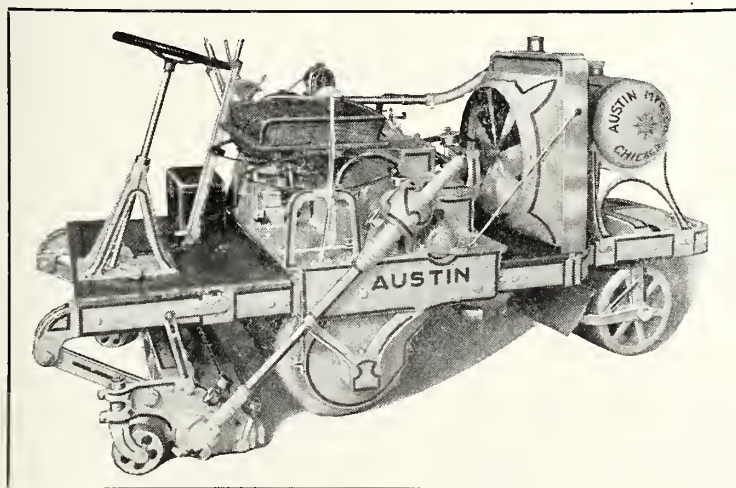
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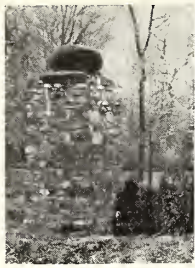
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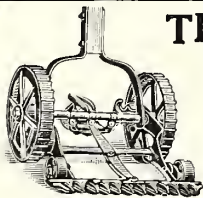
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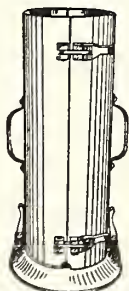


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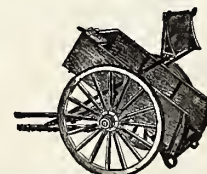
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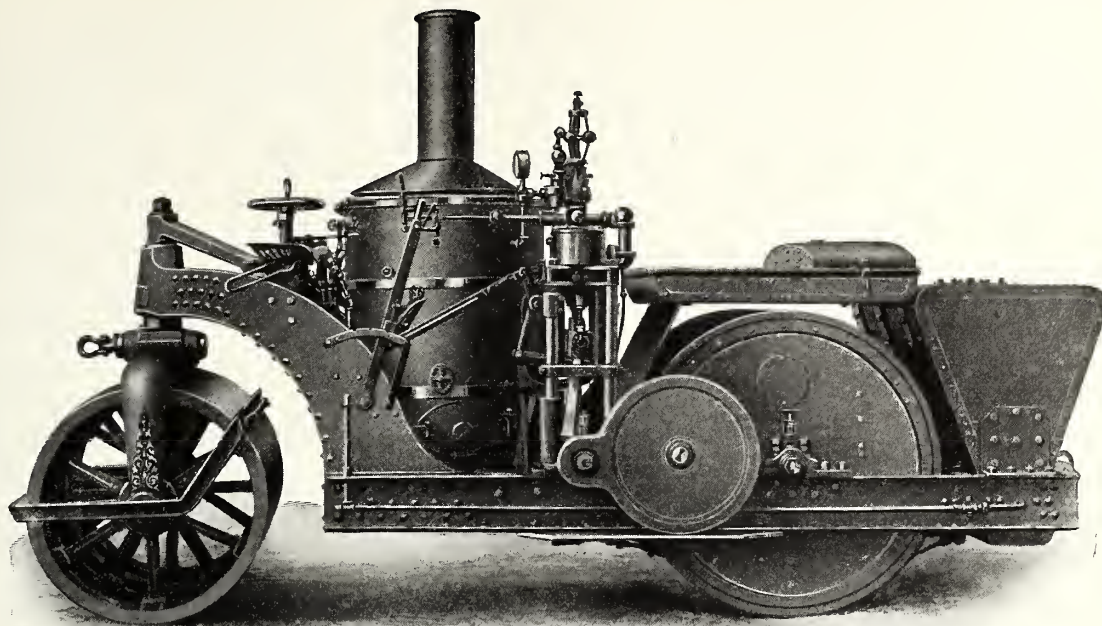
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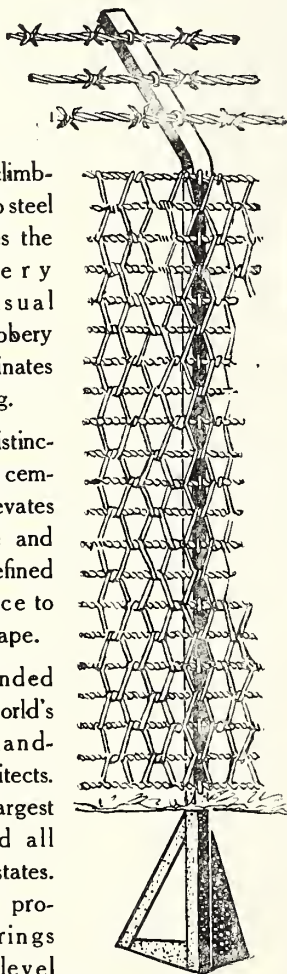
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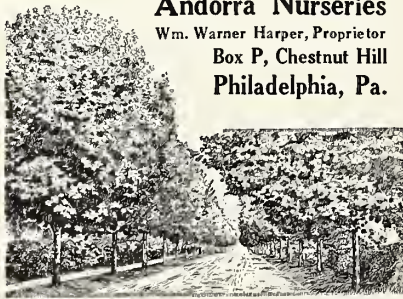
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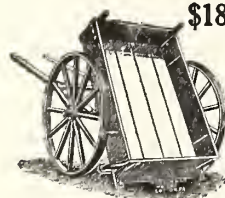
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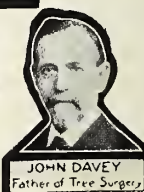
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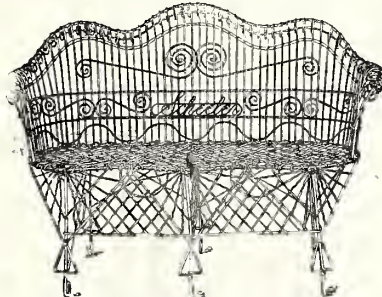
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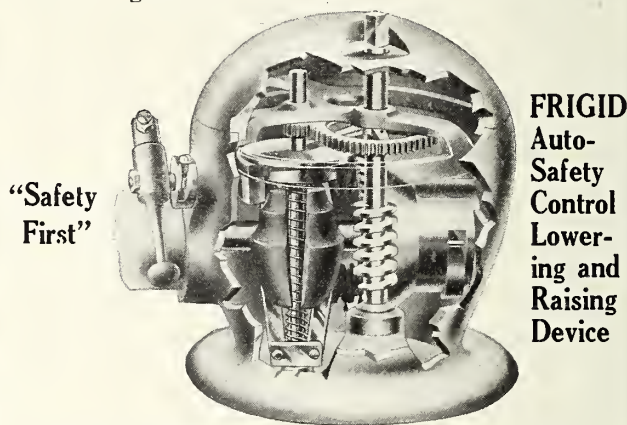
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IT is not a friction device, hence has none of their faults. It is not necessary to hold on to a brake and keep releasing it until the casket descends all the way down. All that is necessary is to merely touch a lever, then the casket, furnishing the power, automatically descends slowly into the grave.



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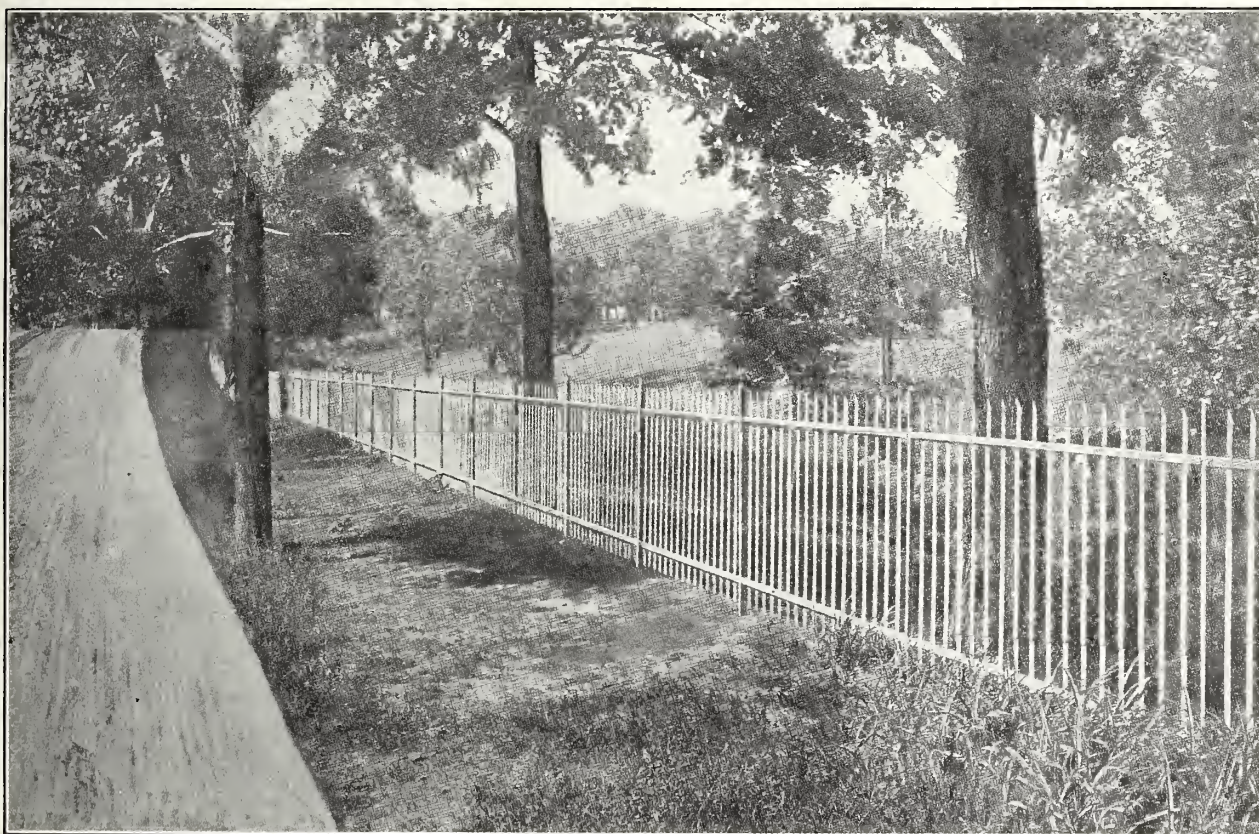
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Vol. XXIV., No. 3

MAY, 1914

SPECIAL FEATURES IN THIS ISSUE

Park Progress in Zanesville, Ohio—Development of Cleveland Park System—A Year's Work in Association Park Systems—Court Decision on Prohibiting Interments—Remodeling and Modernizing an Old Cemetery—Planning the Country School Grounds—Group of Artistic Cemetery Memorials—Examples of Badly Designed Cemetery Monuments.



A PARK VIEW SHOWING IRON FENCE ENCLOSURE.

A Design of Fence Furnished by the Stewart Iron Works Co., Cincinnati, O.

See Page 86.

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Water spread in a fine, dense rain-like spray over an area having a diameter of from 80 to 150 feet, at 30 lbs. pressure per square inch.

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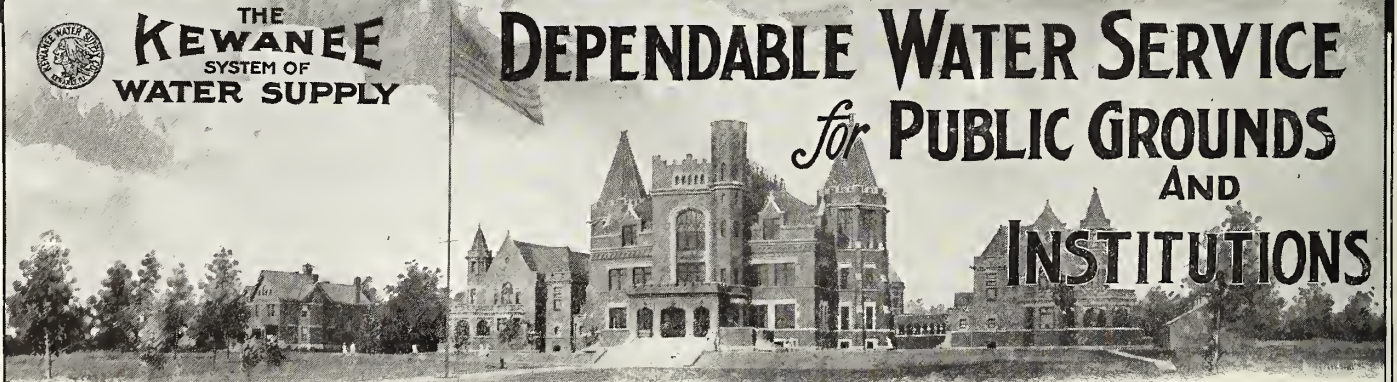
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Lyons, Iowa.
Waterbury, Conn.
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Aurora, Ill.
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Country Club
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Tyrone, Pa.
Meriden, Conn.
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Jefferson City, Mo.
Youngstown, Ohio.
Milwaukee, Wis.
Washington, D. C.
Stapleton, L. I. N. Y.
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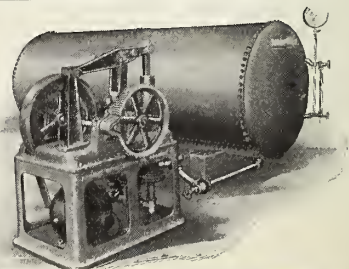
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We have made up our minds to keep on building satisfaction fences. Not expensive fence, mind you, but fence worth the money. If you want that kind, we would like to hear from you.

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MAY, 1914

EDITORIAL

VOL. XXIV No. 3

"Breaking Into The Cemetery Business"

PARK AND CEMETERY recently received a telegram from a Western land development company reading as follows: "For our benefit, in platting our new cemetery, will you kindly wire by night letter, at our expense, the per cent of the different size lots you would recommend us to plat." Having had no previous experience in laying out cemeteries by wire, we were naturally somewhat diffident about devoting the necessary few moments of a busy day to specifying the layout of a cemetery of which we knew nothing except what is revealed in the above message. Consequently we refrained from sending the night letter requested, and hope that the twelve hours' wait did not cause any undue delay in disposing of the interments that seemed to be awaiting the opening of this new burial ground. Perhaps we were unduly deliberate in waiting till the next day and writing an ordinary letter under a two-cent stamp to the following effect: "It was not possible for us to give you any advice by wire that would be of use to you, so we did not reply by night letter. We are going to try to get some practical advice on this subject for you from experienced cemetery men, but it is very hard to tell you anything that would be of help to you, as local conditions, the size of your grounds and many other individual factors have to be taken into consideration in studying every proposition from an individual aspect. The first thing for you to do when laying out a new cemetery should be to secure the services of an experienced landscape architect who has made a specialty of cemetery work. You ought by all means to have expert service in planning and laying out your grounds, and you should not think of starting a cemetery unless you have some assistance of this character."

Almost before the ink had become dry on this advice came a letter from an attorney-real estate agent in the East, reading: "Can you give me an idea as to the number of lots that could be sold from a twenty-acre tract which I have under consideration for a cemetery and at about what price per lot? I have an option on a good location which can be bought for \$250 an acre. My object in taking this matter up is to make some money, and would like some general information before going into the project."

More conservative than his Western brother, this gentleman does not wish his platting done by wire; and is modest enough to think that he "would like some general information before going into the project."

Within a few days of these communications came another letter reading as follows: "Have you any record and is there any record obtainable of the number of cemetery companies organized as a stock proposition, and if so, have you any data as to the capital stock of such companies, the length of time they have

been in existence, the value of stock, and the dividends they have paid if any?"

From all of which it is inferred that there is a strong tendency among real estate operators, promoters, investment brokers and other business men who deal with land and investments to "break into the cemetery business," over night and without experience. To these inquirers and to others who are inclined to figure that the difference between the price of farm land by the acre and cemetery lots by the square foot is all profit, we should offer the general advice that the development of a cemetery is a highly specialized business, demanding years of experience and technical training. It is necessary to get not only a little "general information," but a lot of expert advice and technical service. The first thing to determine is, of course, the need for a cemetery, and the next is the ability to develop the best possible under the local conditions present. The selection of the land, the planning and platting of the ground, should be studied by a cemetery landscape architect of long experience, and the grounds developed and managed by a trained cemetery executive. In general, our advice would be, do not break into the cemetery business over night and do not do your platting by wire. A cemetery man of long training and good judgment, to whom we submitted one of the above queries, puts the matter very forcibly as follows: "The sending in of inquiries of this kind, constantly repeated from all parts of the country, and evidencing such absolute lack of any technical knowledge regarding the cemetery, either as to building or operating them, is astonishing. There seems to be a feeling widespread that any person without any previous experience is entirely competent to build and operate a cemetery. The planning, building and operating of a modern cemetery is a highly specialized profession and it requires brains, training and experience, and yet we see good business men putting many thousands of dollars in a proposition of this kind, making mistakes which can never be rectified, oftentimes destroying much of the natural beauty of the grounds, and invariably failing to take even reasonable advantage of the possibilities of the tract, invariably wasting much money, simply by failing to employ some one who knows the business. This same man, if investing a tithe of the money in any manufacturing or merchandising proposition, would consider it insanity, if inexperienced himself, not to employ expert and experienced managers. The writer would strongly urge upon your correspondent to employ some cemetery man who knows, and feels very certain, in view of the expensive blunders being made everywhere by the amateur, that the salary of such a man would be more than saved by economy in development work, while the ultimate results would be vastly better."

Editorial Notes

Western yellow pine cones, to the amount of 6,377 bushels, obtained on the Bitterroot national forest, Montana, yielded 9,482 pounds of seed. The average cost of the extracted seed was 41 cents per pound.

California state inspectors at San Francisco have found a new canker disease on chestnut trees recently imported from Japan. According to Dr. Haven Metcalf, the government's expert on such diseases, this appears to be of the same type as the chestnut blight which is ravaging the forests of the eastern United States,

and it is possible that the new disease would be equally as destructive if it became established in this country.

The Department of Agriculture is trying to eliminate the danger to cattle from poisonous plants on national forest ranges. Of these plants, larkspur, loco weed, death camas and water hemlock are the most poisonous. Larkspur does the most harm, because it is so widely distributed and is particularly bad for cattle. Ordinarily, horses will not eat larkspur, and sheep can eat it without apparent injury.

DEVELOPMENT IN PARK SERVICE IN CLEVELAND



BOATING IN GORDON PARK, CLEVELAND.

A review of the past year's work in the park system of Cleveland, Ohio, shows unusual activity in park development and notable accomplishments in the wide variety of park service furnished to the people.

Gordon Park, the 112-acre tract situated on the shores of Lake Erie, is one of the best patronized parks in the entire system. Doan Brook, which runs through this park, was dredged, and new stakes provided mooring for upwards of 172 launches and 25 rowboats. Motor boating should be encouraged and better facilities provided, such as an outer harbor or widening of the creek, with a large lagoon if practicable. The new concrete drive along the lake

drive is an experiment in boulevard road building which is expected to demonstrate the usefulness of this material for park roads.

The annual May Day festival was last year the most successful, as well as the best patronized, as any park feature of this nature. Upwards of 50,000 people attended these beautiful exercises in Gordon, Garfield, Brookside and Edgewater parks. Crowning the May Queen, doll parades, drills, children's dancing, music and winding the May pole were the attractive features at each park. In order to encourage the use of our beautiful parks, a system of permits was put into effect, so that churches, societies, lodges and neighbor-

hood parties could have their outings and have the accommodations, such as tables, benches, etc., in properly divided parts of any park. There were 54 permits issued during the season.

Cleveland's Birthday, July 22, was certainly celebrated in such a manner that the old-time basket picnic, enjoyed by over 50,000 people, will ever be remembered by those present. Playground children from every section of the city enjoyed all manner of games and other exercises. This department was represented by floats with children from each playground.

During the period from June to September, sixteen playgrounds were in operation; all apparatus was put in first-class condition, as was added apparatus put where needed.

Considerable trouble was experienced with the cutting of grass on account of the lawn mowers in use being old and worn. The problem of purchasing new mowers was thoroughly investigated, with the result that six Coldwell motor lawn mowers were purchased. The superintendent reports that the condition of all lawns the past season was by far the best ever had; the motor mowers with capable operators were able to keep the grass cut oftener and at a saving of \$60 per day over the old method. These mowers replaced eighteen horse-drawn mowers and did better and more grass cutting.

The establishing of a storeroom and repair shop has been the means of a great saving to the city. The repair shop, under the watchful eye of an experienced general foreman, took care of all repairs to tools, machinery and apparatus, also needed repairs to buildings, thereby eliminating the loss of time usually incurred when work of this character would have to go through the general routine of requisition.

A concrete pavement, with combined concrete curb and gutter, varying from 30 to 40 feet in width, extending along the shore of Lake Erie from the westerly to the easterly limits of the park, a distance of 3,800 feet, has been constructed at a cost of \$22,450. This is the new type of pavement, which we considered a good, practical and reasonable park pavement. The contractor guaranteed the pavement for one year. A section about 600 feet in length was given a coat of Tarvia and silica gravel upon its completion for the purpose of testing its durability.

Dredging Gordon Creek, the mooring place for hundreds of motor boats has been completed. This work was formerly done by laborers with use of shovels, scoops and wheelbarrows, and the greatest depth obtained was only three feet. With the use of the derrick and clam-shell, a depth of five feet was secured in much less time, and at a saving of \$400.



MOTOR LAWN MOWER IN CLEVELAND PARK.

The hill drives leading to the lower boulevard in Rockefeller Park were rebuilt and are now in first-class condition. The average cost of this work, which was done with the use of Tarvia as a binder, was 25 cents per square yard.

All the macadam drives in Wade Park were treated with calcium chloride and limestone dust, the principle of this treatment being that its absorption of the moisture of the atmosphere would make unnecessary the sprinkling of these drives. Fifty thousand square yards were treated in this manner at a cost of 4 cents per square yard.

Two municipal dancing pavilions have been operated by the city during the summer season. These pavilions were recently built as shelter houses and converted to their present use at a small cost, merely the putting in of maple floors. The dimensions of the dancing floor at Edgewater are 83x34, and at Woodland Hills 76x33 feet. This alteration in no way prevents



DREDGING GORDON CREEK.



A CLEVELAND PLAYGROUND EXHIBIT.

the buildings from being used as a shelter house. A manager, chaperon, ticket takers and other attendants are in charge, under the control and supervision of the Park Department.

Fairview Park was formerly a reservoir from which the West Side received its water supply. On completion of the great tunnel these grounds were turned into a small park and playground. In order to make this a park such as it should be, we decided to level it. The work is progressing very rapidly and satisfactorily. Work is being done by direct labor under the supervision of this department.

Swimming pools made from the old abandoned filter beds at the northerly end of East 110th street have been well patronized during the year. The new swimming pool at Sterling playground has also received its share of patronage during the playground season.



GRADING IN FAIRVIEW PARK.

The Department of Forestry, by systematic and well-planned efforts, has succeeded in the suppression or extermination of some of the worst forms of leaf-sucking insect pests throughout the park plantings. In this connection valuable aid has been rendered the department by the entomological division of the state authorities. A number of co-operative experiments have been conducted under the direct supervision of Prof. H. A. Gossard, State Entomologist, and his assistant, Professor J. S. Houser.

The playground season of 1912 covered a portion of about three months, from June 10 to September 10, and the work accomplished maintained its usual steady development. The popularity of the playgrounds is best illustrated by comparing the attendance of the past few years. During the year of 1910 the total attendance amounted to 272,397, and for the past sea-

son, with an increase of but two playgrounds, the total attendance was 616,133.

The playgrounds were represented in the Fourth of July pageant by thirty floats, depicting American history from the landing of the Pilgrims to present day politics. Two cups, five medals and eleven flags were awarded to the department. On Cleveland Day a parade took place in which every city department participated.

The playground had four floats in line, showing a model playground, a baby dispensary, a frame of baby swings, and last, Columbia and different nations, symbolizing the cosmopolitan nature of our playground patrons. In the afternoon the children gave a demonstration at Gordon Park, presenting folk dances, drills and marches, followed by races and contests. The girls

presented a beautiful sight, being dressed in costumes made by themselves of material furnished by the Park Department. About 30,000 people witnessed the exercises.

The officers of the Cleveland Park Board are: Fred C. Alber, superintendent; A. J. Sindelaer, secretary; Samuel Newman, park engineer; John Boddy, city forester.

REMODELING and MODERNIZING AN OLD CEMETERY

Walnut Hill Cemetery, Council Bluffs, Ia., was platted in 1860, but has just lately been reorganized and about \$20,000 spent in improvements, to place it under modern methods of management. It is now under

the association, but three years ago, when the present officers were elected and took over the cemetery, all of the acreage was replatted and laid out by the Towle Engineering Co., landscape architects.

ding necessary, is 5 per cent per annum on the perpetual care payment. In other words, if the perpetual care on a lot amounted to \$100, the annual care for taking care of this lot would be \$5.



LAWN AND TREES IN WALNUT HILL CEMETERY, COUNCIL BLUFFS, IA.

perpetual care and the rules and methods of management have been carefully studied to conform to the best modern practice.

The cemetery is owned by Walnut Hill Cemetery Association, a corporation organized about 1860, at which time the grounds, consisting of about thirty acres, were laid out as a cemetery. The officers of the association are: Nathan P. Dodge, Jr., president; C. L. Dodge, vice-president and treasurer; Robert B. Wallace, secretary; J. F. McCargar, superintendent.

The grounds are situated in the hills and are quite rolling and covered with a beautiful growth of black walnut trees. The first plan of the grounds in the early sixties was made by local men who formed

The only buildings are a waiting station, into which an electric line runs, and the superintendent's cottage, which was built about ten years ago.

The cemetery was put under the perpetual care plan in March, 1911. All lots sold since that time have been sold with the perpetual care provision, and many of the old lot owners have taken advantage of the opportunity to put their lots under this plan by a payment of 25 cents per square foot. The association has an endowment fund and a perpetual care fund, the total of both funds being about \$12,000. The lots which are not under perpetual care are taken care of on the annual care plan, and the price for this, including all sod-

There were 150 interments in 1913 and the total number to date is about 1,300.

During the last three years the management has spent approximately \$15,000 in extensions, improvements and purchase of additional grounds.

The following extracts from the book of rules recently issued will give some idea of the way the grounds are maintained and governed:

Mounds over graves shall not be raised over two inches and shall be sodded. The planting of flowers on graves will not be permitted, and but one flower bed will be allowed on an entire lot; except where half lots have been sold, one on each half lot may be planted.



VIEW IN CHOICE SECTION OF WALNUT HILL.



ENTRANCE TO WALNUT HILL CEMETERY.

The association will plant trees and shrubs in accordance with the general plan for the ornamentation of the grounds and no additional planting by lot owners will be permitted. The Board of Directors have no wish to interfere with the tastes of individuals as to the style of their improvements, but in justice to the interests of the cemetery, they reserve to themselves the right of preventing or removing any structure, tree, plant or other object which they shall deem injurious to the general good appearance of the grounds and adjoining lots. No fences, coping or other enclosures of any kind will be permitted. Boxes, shells, artificial flowers and similar articles scattered upon the graves and lots are entirely inconsistent with the proper keeping of the grounds and will not be permitted.

No filling or grading of lots other than to eliminate irregularities of the ground will be permitted. Unfilled urns will not be allowed to remain on lots after June 15. They will be removed and stored, subject to the order of the lot owner.

To prevent unsightly crowding, not more than one monument will be permitted

on an entire lot, or half lot, where half lots are sold.

Grave markers shall be not more than 30 inches in length, 12 inches in thickness, nor less than 16 inches in length and 8 inches in thickness, and shall not extend more than 12 inches above the surface of the ground. On lots having the graves arranged with the view of placing a monument, all grave markers must be set at the end of the grave farthest from the monument, or where designated by the association. No monument shall be erected on any lot in blocks 8, 11, 12, 14, or in sections hereafter platted for sale without first submitting plans of same to the cemetery association for approval.

Grave markers may be erected in the single space sections, the dimensions of which do not exceed 30 inches in length, 16 inches in thickness and 36 inches in height.

Granite is considered the best and most durable materials for memorials. Limestone, sandstone and soapstone are unfit for such purposes and their use will not be permitted.

Corner stones on lots must not project above the surface of the ground, and to

avoid injury to them in mowing, the lettering should be sunken.

No monument, marker or other structure made of a metallic substance other than standard bronze will be allowed, except urns (they should have reservoirs), which may be made of iron or stone.

Each foundation must be as long and as wide as the base stone resting upon it, and for monuments shall be not less than four feet deep; for markers not less than two feet deep, unless the marker is a single piece extending two feet below the surface of the ground. All foundations shall be constructed of concrete, shall not extend above the surface of the ground, and must be constructed by the cemetery association. Orders for same must be given at least two weeks in advance of time memorial is to be set, and no foundations will be constructed between November 1 and April 1, nor between May 15 and June 1. Material for stone work will not be allowed to remain in the cemetery longer than is necessary to complete the work, and refuse and unused material must be removed as soon as the work is completed. In case of neglect or violation of these rules same will be removed by the association at the expense of the lot owner.

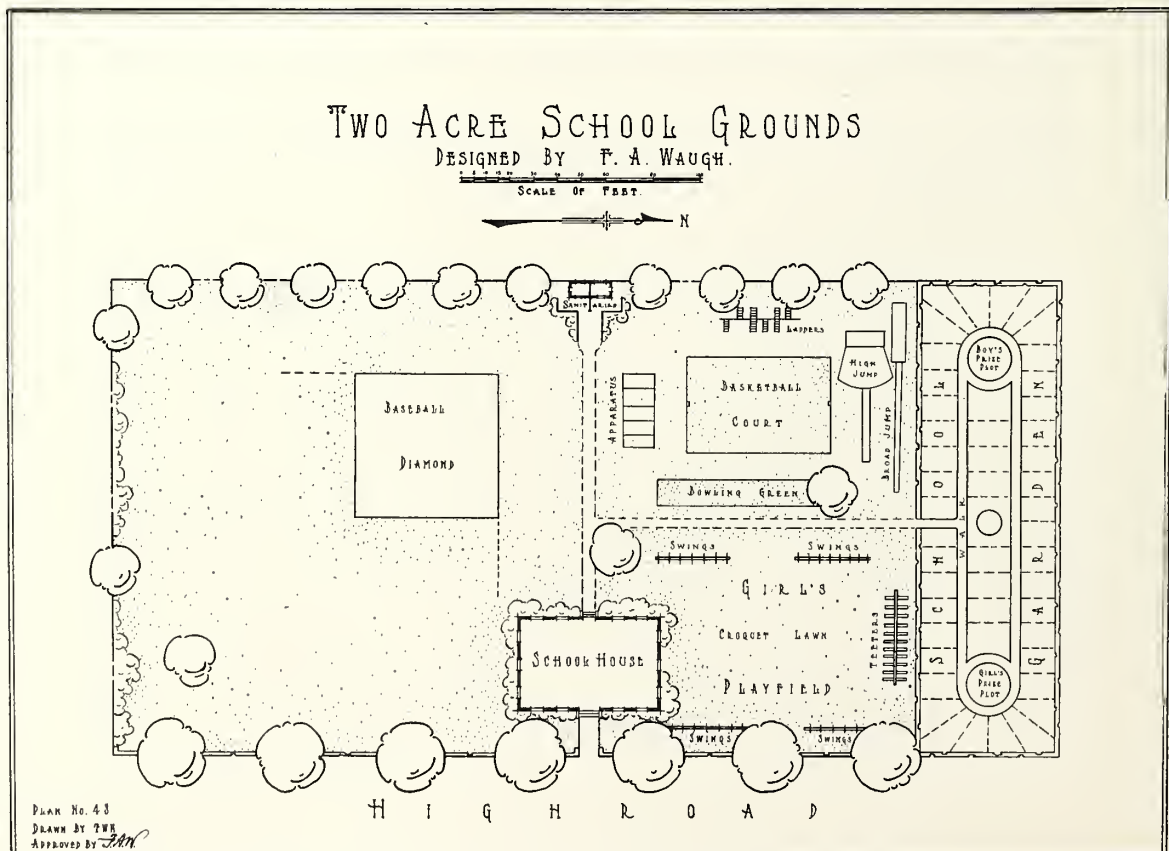
PLANNING THE COUNTRY SCHOOL GROUNDS

The Massachusetts Agricultural College has just issued a very interesting illustrated bulletin on "Country School Grounds" that treats this very practical problem of

landscape development in a helpful and interesting manner. The bulletin is the work of F. A. Waugh, professor of landscape gardening, and P. H. Elwood, Jr., exten-

sion instructor in civic improvement, and illustrates four suggestive plans for model lay-outs of country school grounds.

"Some school grounds are too small,"



says this bulletin. "The country boy who does not necessarily cover more than half an acre in his first ten minutes of play should be sent to the hospital at once. There is something wrong with him. In the country, where land is cheap and where people are unused to being crowded, the school grounds should be ample. One acre may be regarded as the minimum for any school; two acres is not too much for a large and well-managed country school; while high schools and academies, especially those teaching agriculture, will sometimes need five or ten acres. Country schools which now have less than one acre should buy more at the first opportunity."

The school house, which, of course, should be well built, well furnished, well lighted, well ventilated, well painted and well kept, should be placed well forward on the lot, near the street. This is because land back of the school house is valuable, while that in front is comparatively useless. A distance of twenty to thirty feet back from the road is usually satisfactory. Where practicable, one good shade tree—maple, oak or elm—should be placed twelve to twenty feet to the south of the school house, and another similar tree the same distance to the southwest. The shadows of these trees, falling on the building, will do more than any other one thing to relieve that appearance of forlorn nakedness and utter crudity so depressing in the average school house. Wherever conditions permit, much can be gained also by having a narrow border—three to six feet wide—of shrubbery along the house foundations. Usually these borders should be of native species collected from adjoining fields by school pupils.

The sanitariums should be placed at the back line of the lot, in which case they should either be separated by a fence or

should be at the outside corners, with the width of the lot between them. They should be screened from view by plantings of native shrubbery. In certain cases it is better to group the sanitariums at the back of the school house, connecting them with the woodshed or some similar structure. Very special effort should be put forth to keep them clean and in repair.

Fences may be dispensed with on a good many rural school grounds, and should never be built unless clearly needed. Where they are positively required they are usually best made of heavy woven wire, boy-high, boy-strong and boy-tight, to paraphrase a famous saying. Every fence should have enough annual attention to keep it whole and standing straight.

On a few country school grounds horse sheds will be needed. These should be at the back of the lot, out of the way of the play, but open to constant public view.

A baseball diamond is the first necessity for a playground. A full-size diamond, ninety feet between bases, requires about three-fourths of an acre in itself. A small boy's diamond, sixty feet between bases, requires half an acre, or more than the entire allowance for some school grounds. Other sorts of play should also be provided for, such as swings, slides, etc., with adequate open ground for the usual children's games.

The planning and equipment of playgrounds and the organization of proper play is a whole subject in itself. In many communities this matter ought to be taken up urgently and quite aside from the question of school grounds.

Every country school ought to be provided with some sort of school garden. One-quarter of an acre will be ample for most schools, and a quarter of that will be a great deal better than nothing. This garden, however, should be an integral part

of the school plan. It should lie next to the playgrounds, and should form an attractive feature in the general effect.

On Arbor Day it is customary for the girls to speak pieces and the boys to plant trees. Inasmuch as the average school yard has room for only three or four trees, this exercise has to be given up or the yard is soon overcrowded. Plantings of shrubs about the foundations of the school house, along the property bounds and in front of out-buildings may well supplement or take the place of tree plantings. Such shrubs should preferably be of native species collected from the fields by the students. The best plan is to grow them a year in the school garden nursery before transplanting to permanent situations. More elaborate schemes of so-called ornamental planting on school grounds are to be viewed with suspicion. Flower beds in the front lawn rarely yield anything more than disappointment, and not much of that.

The most important points to be observed in school ground design are:

1. *Convenience*.—The practical requirements must be met first and absolutely. They are very definite and cannot be ignored.

2. *Simplicity*.—The simplest scheme of lay-out is almost necessarily the best.

3. *Orderliness*.—A hit-or-miss, jumbled-up arrangement of parts is fatal to good design.

The "beautification" of school grounds, sometimes soberly discussed, must be achieved through convenience, simplicity and good order. A failure in these qualities can never be covered up by any quantity of "ornamental planting." Maintenance is even more important than the original lay-out of school grounds. The grounds must be kept clean and in good order at all times.

COURT DECISION ON PROHIBITING INTERMENTS

(Continued.)

That one of the petitions as presented urged as a reason for the abolition of the cemetery that "being in the vicinity of the new Union Depot, it is a drawback to the progress of the Twelfth (12th) Ward."

That Main street, which lies to the west of the cemetery, rises pretty steeply to the south until it reaches Thirtieth street, and from there going south, it descends for a distance of two or three blocks, with the result that it makes a long, stiff pull up hill for loads going south, and this point has become known and designated as the "Main street hump" by persons who are in favor of cutting Main street down at Thirtieth street, and for some distance both north and south thereof.

That the ordinance complained of was introduced in the council in response to the importunities of said witnesses and in obedience to said petitions. That during

the pending of said ordinance in the council the press of Kansas City advocated its passage for the reasons mentioned, and not as a public regulation, for the benefit of the health and well-being of the city.

Among the articles so published the following have been selected from the *Star*, one of the leading papers of the city and of the United States:

"Eager to Move That Hump.

One Main Street Property Owner Is Ready to Pay Thousands."

And in the body of the article:

"The subject under consideration by the committee was not the hump; it was the ordinance to bar future burials in Union Cemetery. This will make possible the improvement of Main street as a traffic-way to the south side, and that is how the discussion drifted to the subject of the hump."

And in the article one of the spokesmen is reported as saying:

"I am one who believes in doing things the right way. In addition to reducing the grade of the Main street hill, we should widen the street on the side of the cemetery."

And others said that the cemetery had become "an impediment to the city's growth and improvement."

In the same paper, the day after the ordinance was passed by the upper house of the Common Council, appeared an article stating that among the reasons given for the passage of the ordinance was the fact "that a large part of the cemetery on the west side is unused and is an impediment to improvements in the vicinity of the new Union Station."

In the same article is also said of the signing of the ordinance by Mayor Brown:

"He (Mayor Brown) also was influenced, he (Mayor Brown) said, by the fact that a large part of the cemetery, unused, escapes taxation that falls entirely on abutting property owners."

In another article in the same paper, appearing the day after the approval of the ordinance by the Mayor, it is said:

"It (the cemetery) also is an impediment to improvements in that vicinity because the ground, including that not used for burials, escapes taxation and cannot be used for streets.

"The enactment of the ordinance will clear the way to widen Main street and to open Grand avenue or Walnut street through the unused ground. This part of the cemetery property will become valuable when put on the market, and will have to bear its share of the cost of improvements in that neighborhood."

On the day this action was brought, the same paper, in giving an account of it, said:

"The city ordinance prohibiting future burials in a district including Union Cemetery was passed by the Council July 14. Its purpose was to make an unoccupied part of the cemetery subject to special taxes and public improvements."

And on the evening of March 24, 1911, the day on which the trial of this cause began, and while the trial was in progress, the same paper said:

"All semblance of reason for the rule fails in such a case as that of the Union Cemetery Association of Kansas City. The powers to tax and exercise the right of eminent domain are powers of sovereignty. The powers to avoid taxation and to block a right of way for a public use are equally sovereign. Sovereignty belongs of right only to the public as a trustee for the public. That land held by a burial association, existing for profit accruing by several avenues of business activity, should be exempt from general taxation and from assessments for special betterments is an unreasonable and inequitable thing. That the association should be able to block essential public improvements and continue its financial energies in derogation of public welfare, and do these things in the name of a consecrated privilege, would be a yet more unjust anomaly."

The plaintiffs introduced much evidence as to the physical and sanitary condition of the cemetery.

Charles Johnson, the superintendent of the cemetery, and, in fact, witnesses for both the plaintiffs and defendants, testified that from five to twelve men were employed therein; that the grass was cut several times a year in the summer months by scythes, it being impossible, on account of the plat of the cemetery, to use machinery for that purpose; that the monuments were straightened up, sunken graves were filled and trees and shrubbery were trimmed several times annually.

That there were some pools of water located in the north end of the cemetery, caused by excavations of rock which had been made for the purpose of filling with earth, so the ground could be used for burial purposes; that said pools only existed for short periods during the rainy season; that blue grass grew there, and that those depressions were being filled with earth and would be completely filled within three months.

That for a considerable distance north of the cemetery the land is low and broken and the water during the rainy season sometimes stands there, which is the result of drainage, principally from causes other than the cemetery land.

Johnson, the superintendent, who was a witness for the defendant, testified that he had never seen the cemetery in an unsanitary condition.

Several witnesses whose families are buried in that cemetery testified as to the condition of the same.

Among them was ex-Mayor J. J. Davenport, who testified that the conditions in the cemetery were good, but on land outside of the cemetery the conditions were bad; that there were no pools of water standing in the cemetery; that this cemetery was not as well kept as some he had seen in other cities, naming them from an artistic point of view, but from a sanitary standpoint nothing was wrong with it, and that there were no hygienic reasons for closing the cemetery.

Dr. Stephen H. Ragan, a practicing physician in the city, who lives not far from the cemetery; fifteen or twenty members of whose family are buried there, including his grandfather, his father and his wife, who has been a visitor there weekly, and sometimes two or three times a week for many years, says that aside from the roads the cemetery is in a fairly good condition; the ground is hilly and the rains wash the gravel out of the driveways. He has never seen anything there which was in the least unsanitary or dangerous or deleterious to health.

Mr. J. Lee Porter, whose ancestors for three generations are buried in the cemetery, testified in substantially the same way.

Mr. O. R. Welch, an expert civil engineer of many years residence in the city, described the topography of the property from actual examination and survey, and testified that:

The south part of the cemetery ground is on the highest level; from there it slopes through its entire area to the north and east; there are two small draws in the ground running in a general northerly direction and they unite near the northern end of the cemetery; that carry off the drainage, and eventually the drainage reaches O. K. Creek, which lies about one-half to three-fourths of a mile to the north, runs west and finally empties into the Kaw

River. O. K. Creek, although a small natural stream, is virtually nothing more nor less than a sewer, used by the city as such, for part of its distance it is open, for a part enclosed. It receives the drainage not only from the cemetery, but from the lands between it and the cemetery, which slope on the one side to the east and on the other towards the west, both slopes terminating in a natural north and south depression, with its slope in a general northerly direction toward O. K. Creek. The ground north of the cemetery to O. K. Creek is rough, ragged and broken. Much stone has been excavated from it. Because of the jagged and unfavorable character of the territory north of the cemetery there are many more houses, in proportion, to the south than to the north of the ground. The plaintiff has a 20-inch sewer in the cemetery which carries off the surface water, and the water from a spring in the grounds in the direction of the natural course of drainage. There is no underground system of drainage, neither is there any in any other cemetery in the city. There is no sewer in St. Peter and St. Paul's Cemetery.

The drainage of the cemetery is taken care of in very much the same manner as that of other cemeteries in the city. The drainage from Mount St. Mary's Cemetery and also from Elmwood Cemetery flows into a creek known as Gooseneck Creek. Gooseneck Creek, like O. K. Creek, serves the purpose of a sewer. It is enclosed part of the way. It runs east instead of west and empties its waters into the Blue River near Sheffield, a thickly populated neighborhood within the city limits.

In the north part of the cemetery rock has been excavated to the extent of nearly five acres. The last excavating was about three years before the trial. This was done because the rock came to the surface, or there was so little soil that it was not regarded, in its existing condition, as adapted for burials. The excavating was done for the purpose of fitting it for burial ground, and the company, since the completion of the excavation, has been filling it with clean dirt, so as to render it suitable for graves, and at the time of the trial it was expected that the filling would be finished in about three months. The company sold the rock so excavated. The pools referred to by some of the witnesses were in depressions caused by these excavations and when the filling is completed will cease to exist.

The potter's field is in the northeast part of the cemetery; there are about two acres in it. Persons are buried very close there. In the year 1910 there were buried in the cemetery 1,363 persons, of whom 406 were paupers and were interred in the potter's field. The cemetery company receives no pay for the ground occupied by these graves. No paupers are buried either at Elmwood or at Mount St. Mary's.

(To be continued.)



PIONEER PARK, ZANESVILLE; SHOWING NATURAL STATE AS TAKEN OVER BY PARK BOARD.

PARK PROGRESS IN ZANESVILLE, OHIO

Zanesville, Ohio, a city of rarely picturesque natural situation at the junction of the Muskingum and Licking rivers, is unusually fortunate in having fine natural locations for parks that are being im-

proved in a progressive and energetic manner.

The principal parks are located in three sections of the city, one in each of the triangles formed by the junction of the

two rivers. Two of these parks are gifts to the city by its pioneer proprietors.

Putnam Hill Park comprises about 18 acres of land, beautifully varied in contour, overlooking the falls of the Muskingum



LAKE IN McINTIRE PARK, ZANESVILLE, BEFORE SHORE PLANTING WAS DONE.

and the mouth of the Licking, spanned as they are by the beautiful "Y" bridge, which is one of the famous structures of Ohio. It is a high promontory, more than one-half of which is level ground at the highest point, jutting into the river 150 feet above the water.

The work of the past season under the plans and designs of Superintendent of Parks Hugh A. Imlay has demonstrated the beauty of McIntire Park and the opportunity offered for making that part of the city attractive. The year 1914 is expected to show what carefully executed and skill-

Hill, which in the olden time supplied the drinking water for a large portion of the people of the old town living in that vicinity. The Park Commissioners have named this old "Water Works Hill" and cemetery "Pioneer Park."

Another beautiful piece of park ground is owned by the city and known as Fair Oaks Park, and was the gift, with several other small tracts in this section of the city, of the proprietors of Fair Oaks addition. In this case the donors gave, not only the park site of about two and one-half acres, but graded it and planted the trees which are now growing so finely there.

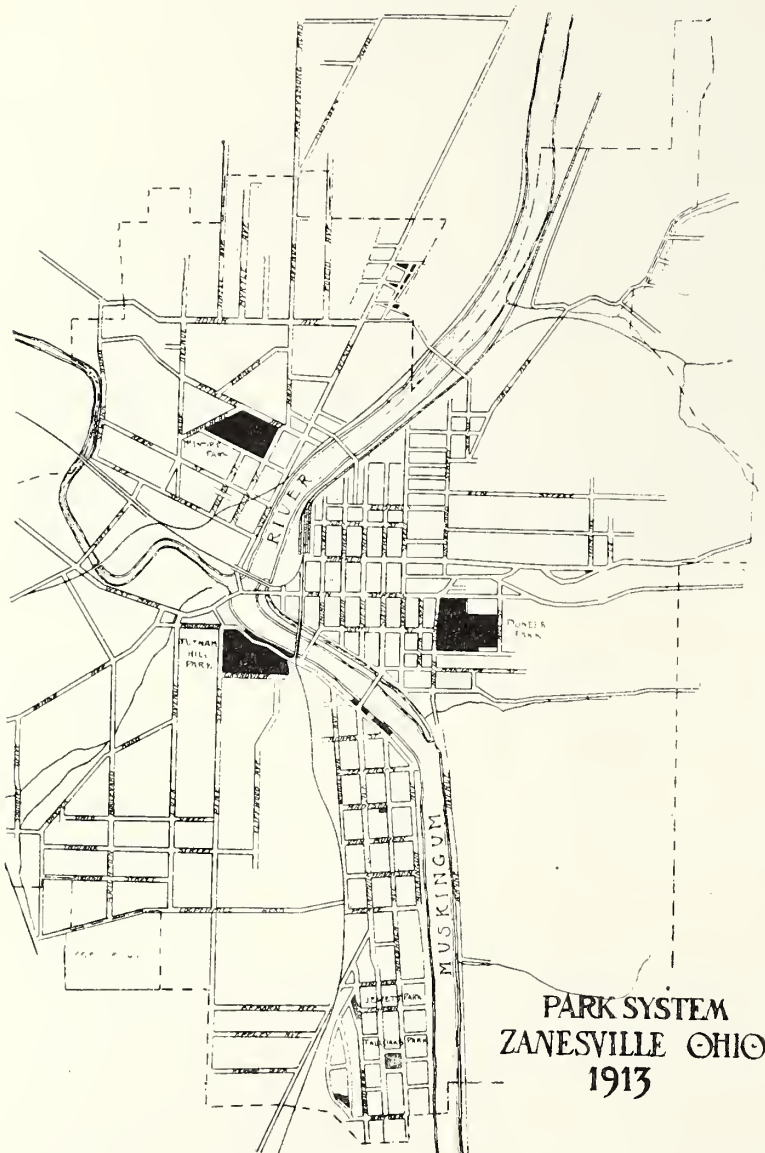
Jewett Park, one of the Fair Oak gifts, is a triangle of over an acre of land at the junction of Jewett drive and Woodlawn avenue, at the approach to Buckingham Terrace, is capable of good development, and plans to that end are being worked out.

Zanesville also possesses a number of small pieces of land that come under the care of the Park Commissioners. There are a number of triangular tracts of land in Park Place, adjoining Central avenue and east of Linden avenue, near the Monroe street bridge, that were granted the city in the original plat of Park Place, which ought to be improved, but which cannot be successfully or economically done until the streets surrounding them are improved.

President Spangler, of the Park Board, has urged the importance of beginning the acquirement of the valley of the Licking River, and suggests that the city own every foot of both banks of this stream from the "Y" bridge to Dillon Falls. No more picturesque and scenic location can be found in this section. Its shores should be opened up with splendid driveways or boulevards, occasionally crossing the stream and leading from the "Y" bridge to Dillon Falls, and Dillon Falls also should some day be made a part of a public park.

Under a recent law in Ohio, cities may take over county fair grounds to be maintained and used as public parks, subject only to the use by the County Agricultural Society during the week of the annual fair. The directors of the Muskingum County Agricultural Society are willing to make such contract, and the Park Board expects to have entire control of the grounds for a public park and playground for the maintenance of the tract. These fair grounds contain about forty-three acres of land, already a beautiful park.

The improvement of McIntire Park is well under way. Over 275 trees, ranging in diameter from six to thirty-six inches, were removed to make the open spaces as designed. About one-half the total lawn area was graded, plowed, raked and seeded. The lake was drained, enlarged and the shore lines and island changed according to the new designs. The excavated



One of the interesting features of Putnam Hill Park is the exposed stratified stone, which, beginning with the limestone below the water line of the river and extending to the highest point, is a complete geological map of Ohio, and here can be studied by the geologist and the student the formations of the crust of the earth in this section of the state. The elements and the wash of the river at the base have kept these formations in plain view, and the beauty of the exposure of these developments of the ages has been the delight of visitors.

McIntire Park, which contains about 12½ acres of land, is a gift of the estate of the patron saint of Zanesville, John McIntire, and is splendidly located in the midst of a large population and easily reached by public thoroughfares and street car service.

fully made plans will accomplish in this park.

A year ago the City Council by unanimous vote set apart the land on the east side of the river, known as old Water Works Hill, for park purposes. This tract contains about twelve acres. This also contains elevated land on which the first reservoirs of the Zanesville water works were located. With the exception of a few maple trees planted on the north slope of the hill nothing has been done to improve this property. Yet from its summit are seen the most superb views of the city to be had anywhere. The view extends westward up the valley of the Licking, northward far up the curves of the Muskingum River, and southward down the river for miles. A wonderful spring of purest water for more than a hundred years has gushed from the base of Water Works

material was used in grading the lawn areas. The outlet drain was clogged with roots and it was necessary to take up and relay about fifty feet. A large number of small catfish were placed in the Muskingum. Two rustic foot bridges connecting the island and shore were constructed. Our illustration shows the lake before planting was done along the shore line.

The walks were all constructed except those in the southwest point, which must be filled, and on the upper terrace, near the well and proposed building. All walks were constructed of gravel with a clay binder, upon a foundation of cinders; a light

course of limestone screenings is to be put on, and the edges straightened up and seeded this spring. About 3,000 lineal feet of walk was put in. The drive, a five-inch limestone macadam, 16 feet wide and 1,800 feet long, is practically complete.

In Putnam Hill Park maintenance work began with a general and thorough clean-up of the whole park. All dead trees were removed and rubbish and brush cleared from the ravines. During the summer a topographic survey was worked up and a study of the proposed drive system made. Construction work was begun on this in November, and practically all the large

fills have been made, so that the sub-grade should be properly settled this spring.

The bluffs along the Dug Road from the river up were thoroughly cleared of all rubbish and dead trees, and fences were built along the dangerous slides. Four cars of crushed limestone was put on the road to keep it in a passable condition until permanent improvements can be made. Special attention was given to drainage to prevent future slides.

T. F. Spangler is president of the Park Commission and Hugh A. Imlay is secretary and superintendent.

OFFICIAL COMMUNICATIONS

H. S. RICHARDS, Chicago, President



AND CONTRIBUTIONS

J. J. LEVISON, Brooklyn, N. Y., Sec.-Treas.

GOVERNMENT STUDIES OF ORNAMENTAL PLANTS.

The Department of Agriculture at Washington is desirous of obtaining as much information as possible on the habits of ornamental plants in all parts of the coun-

try, and the Bureau of Plant Industry is asking the co-operation of persons interested in horticulture in collecting data on the ornamental flora in their vicinity.

SPECIES

VARIETY	191		
Place of observation			
LEAVES.—Dates of leaf buds bursting beginning to fall	; all fallen	; fully opening	; beginning to color
FLOWERS.—Dates of first bloom	full bloom	; blossoms fallen	
FRUITS.—Dates of beginning to color finished dropping	fully colored	; beginning to drop	
Last spring frost	; first fall frost		
Color of flowers	; color of fruit		
SOIL.—Fine, coarse, light, heavy, sand, loam, clay; very, moderately dry, moist, wet, waterlogged, marshy, stream, lake, at an elevation of about feet above sea level, protected by	, exposed to		
REMARKS:*			

* In remarks, kindly state the insects or diseases to which subject, or other items of interest.

SPECIES

VARIETY	191	
Place of observation		
STEMS annual, biennial, perennial, herbaceous, woody, vine, shrub, tree prostrate, creeping, climbing by tendrils, discs, hairs, twining; spreading, round, oblong, obovoid, ovoid, oval, pyramidal, columnar; drooping, smooth, hairy, rough, prickly, winged, yellow, red, green, brown, gray.	feet high; acaulescent, stems stout, slender, erect, ascending, reclining, decumbent, HEAD regular, irregular, close, open, low, high, narrow, slim, wide, flat, BRANCHES low, high, many, few, erect, ascending, spreading,	
LEAVES simple, compound, evergreen, deciduous, alternate, opposite, whorled; leaflets orbicular, obovate, cuneate, spatulate, oblanceolate, cordate, reniform, auriculate, sagittate, hastate, peltate; truncate, retuse, emarginate, obcordate, macronate, cuspidate; MARGIN entire, serrate, serrulate, dentate, crenate, repand, sinuate, incised; pinnately, palmately lobed, cleft, parted, divided; UPPER SURFACE rough, smooth, dull, bright, glossy, hairy, light, dark, olive, pea, bronze, yellow, green; LOWER SURFACE rough, smooth, dull, glossy, hairy, light, dark, whitish, pea, olive, bronze, yellow, green.	inches long, linear, lanceolate, oblong, elliptical, oval, ovate, APEX acuminate, acute, obtuse, BASE, acuminate, acute, obtuse, truncate, cordate; perfoliate, stipulate; COROLLA papilionaceous, caryophyllaceous, cruciferous, rosaceous, lilaceous, orchidaceous, COLOR green, white, cream, yellow, orange, pink, scarlet, red, crimson, rose, purple, blue, violet.	
FLOWERS.—INFLORESCENCE, conspicuous, inconspicuous; simple, compound, erect, drooping, solitary, raceme, corymb, umbel, head, spike, spadix, catkin, panicle, cyme, glomerule inches across; galeate, ligulate, labiate, personate, rotate, crateriform, salverform, tubular, funnel-form, campanulate; FRUIT inconspicuous, conspicuous; pod, key, akene, nut, drupe, pome, pepo, berry; COLOR brown, white, yellow, orange, red, purple, blue, violet.		
Negative number of phot. graph of this specimen	Negative number of photograph of the same species	

Date
GOVERNMENT BLANKS FOR PLANT REPORTS.

Observer

With this in view, a form for the recording of the desired information has been prepared, which will be supplied to anyone signifying a willingness to co-operate in the work. The information asked for covers the time of opening and dropping of leaves and flowers, and coloring and dropping of the fruits when there are any. Those willing to report information of this character will please write to F. L. Mulford, Landscape Gardener, Department of Agriculture, Washington, D. C., and blanks similar to those reproduced here will be sent.

RECENT WORK IN ASSOCIATION PARKS.

The association recently sent out a circular letter to members for the purpose of determining recent progress made in the various park departments represented by the association membership.

The following letter and a number of replies received furnish an interesting record of park accomplishments:

Dear Sir:—This letter is being circulated to our members for the purpose of feeling the progress made by the various park departments represented in our membership. New attainments and new ideas are, of course, of greater interest and value, but if there is nothing very new, please write the secretary anyway, and tell him what has been accomplished by your department during the past year or two. Personal accomplishments or undertakings are equally welcome. Your reply will appear in the association's department of PARK AND CEMETERY, and will serve to interest and enlighten your fellow members. You may be no less interested in the replies of the other members.

* * *

The most important occurrence with us during the last two years was the consolidating of the three park districts under

one management. The Park Department has been taken out of politics and was placed under civil service rules. The three city commissioners, who were elected for four years, act as a board, with one of their members as president.

Owing to the strict business methods of this commission the parks of our city begin to show the systematic work of the last two years. Many neglected small parks have been remodeled and made attractive.

Four new playgrounds have been established with tennis courts, croquet, basketball, swings, slides, giant strides and boating. This movement, however, is growing, and more facilities will be put up in the near future.

New greenhouses and stables have been built and connected with large working and store rooms. The annual flower display has been enlarged wherever possible and the flowering season extended by planting of thousands of bulbs.

We have collected several thousands of coniferous trees and deciduous shrubs in the Rocky Mountains. The most of these are growing good in our nursery and some have been planted on dry slopes, where only an occasional watering is possible. *Picea pungens*, *Pinus scopulorum*, *Juniperus sibirica* and *Juniperus scopulorum* do exceedingly well in this southern part of Colorado, while the Engelmann's and Douglas spruce and the balsam fir are mostly failures.

Rhus trilobata, three-leaved sumach or squaw currant, is one of our native shrubs, growing just as well on hot, dry slopes as on moist places. One can see this dwarf spreading shrub creep up in gulches exposed to the full sun, forming colonies where a little seepage trickles through the ground, sending the roots to a great depth, which enables the plant to keep its dark green foliage perfectly fresh during the hot weather and drought. Near rivers and on moist places it grows erect, forming bushes six to eight feet high, covered with bright scarlet fruit; branches and leaves are strongly aromatic and entirely different from other plants of the sumach family. It should do well in dry, hot sun exposed slopes, between boulders and gravel.

We have at City Park a low place of about five acres. This was excavated under a former administration and a lake proposed. The bottom consists of sand and gravel to a depth of fifteen feet. I would like to ask the members of this association if it is possible to seal the bottom with twelve to fourteen inches of adobe, which can be had nearby. The water is supposed to be four feet deep.

I shall take this occasion and answer question nine of our question box, "Methods of lawn sprinkling, as to equipment, force of men, sprinkling, etc."

Our parks are equipped with a network of pipes, terminating in a hydrant or street washer of the Eclipse or Murdock type,

every hundred feet square, more or less. Fifty to seventy-five feet rubber hose is needed to reach every spot. It would be better to have the hydrants arranged in eighty-foot squares; a fifty-foot hose will then be sufficient to cover all spaces, allowing for some shortening of the hose for repairs. We are using moulded $\frac{3}{4}$ -inch hose and the C. & B. sprinkler. We start irrigating about the first of April and continue to November 1, but there have been some winters when we had to irrigate in December and again in February.

The force of men depends entirely upon the local conditions of the soil and subsoil. We have parks where one man takes care of only thirty sprinklers and is kept busy, and others, with heavy adobe soil, one man can take care of a hundred. In the latter park we water a certain space once in six or seven days thoroughly. In other parks, with gravel and subsoil, we water once in two days. During the hottest season we water day and night, shifting the sprinklers only twice in the night and every thirty minutes during the day.

Our report for 1913 contains very interesting figures on this question. At Mineral Palace, with heavy adobe soil, located in a river valley, it costs \$12.74 per acre to water during the summer months. At City Park, sandy soil, \$17.16 per acre, and at Mitchell Park, located on a hill, with very sandy soil, \$28.25. The annual rainfall during 1913 was below the average.

G. HENNENHOFER,
Supt. of Parks.

Pueblo, Colo.

* * *

As a secretary, I am unable to recite any unusual accomplishments as to outside work in Seattle, but will mention a feature of secretarial work which has been somewhat of a hobby of mine, to-wit: Publicity. I believe that it pays to exploit in every possible way, locally, the recreation facilities at the disposal of the citizens, encourage the use of them and keep the public informed as much as possible of the plans of the department.

I have made during the last few years over 300 stereopticon views, illustrating the plans and work of the department. These views I am continually showing before commercial and civic organizations, church clubs, fraternal societies, etc. Members who were present at the Boston convention will probably recall my presenting some of them there. These views have won friends for our work, and the fact that we have secured four million dollars of extension funds, voted by the people, is evidence that the people are with us, and it is generally conceded that these pictures and our other publicity methods did the business. Last year, with the aid of one of our daily newspapers, I carried out another idea which I think is worthy of emulation.

A space in the paper each day was assigned to us, free of charge, headed

"Beauty Spots of Seattle's Park System," three columns wide, below which appeared a picture of some park or boulevard, location, how reached, etc. I managed to furnish a new picture for every day for about three months last summer, and it made a great hit as well as increasing the use of our park system.

I am going to inaugurate this same scheme again this summer.

ROLAND COTTERILL,
Secretary, Park Board.

Seattle, Wash.

* * *

While in Seattle during the past year we have been carrying forward a number of extensive improvement projects in park work on a scale for which this progressive metropolis of the Pacific Northwest is attaining fame; one feature of our work is worthy of particular mention as being unusual.

I refer to the use of city prisoners in connection with the clearing, grading and seeding of an eighteen-hole golf course and the grading of a driveway 7,200 feet in length, leading to the course from the boulevard system. The city many years ago acquired 235 acres of logged-off land on a high ridge overlooking the city and harbor and but three miles from the center of the city. A five-acre tract was enclosed as a stockade with prisoners' quarters about four years ago, and all short-term city prisoners are sent there, and the clearing and grubbing of the land was taken up first and has proceeded so far that nearly 200 acres have been turned over to the Park Board and is known as Jefferson Park, of which 101 acres are taken up by the golf course and the remainder by a nursery, greenhouse and athletic field.

The inmates of the "stockade" vary in number from 50 to 150 men, and a large percentage of these men are assigned to me for work in the park.

A few trustees are used at the nursery all the time, while on the golf course and driveway work I have had as high as sixty men, at no expense other than supervision and guards.

Surprisingly good results were obtained, too, as the men are glad to be in the open and do good work, as they are well fed. I am just getting ready to construct a \$5,000 golf shelter and will use the prisoners on excavation, common labor, etc. This idea of using prisoners on park work is probably an innovation and may be thought unwise by some of our members, but I can attest to the good results obtained, and, of course, it has meant a tremendous saving in labor cost. I might mention that I have not worked the prisoners with other men, aside from foremen and guards, keeping them distinctly by themselves except at the nursery and greenhouse, where a few "trusties" work with my regular men.

J. W. THOMPSON,
Supt. of Parks.

Seattle, Wash.

Our associate partner, Mr. Gallagher, has been engaged for some time on an interesting matter of park design, namely, the redesigning of League Island Park in Philadelphia, for the Bureau of Highways of the Department of Public Works. This park has not been turned over to the Fairmount Park Commission, which handles most of the parks of Philadelphia. It was partially improved by the previous administration, but for various reasons the new reform administration has deemed it advisable to stop grading and construction and have a new design of the park prepared. The landscape is to be entirely created, as the area was originally salt marsh and has to be filled mainly by material obtained in the dredging of the channels of the Delaware River. The park is cut in two as a matter of design by the extension of South Broad street as a wide parkway on a straight line. This will have a rapid transit route in it according to present plans, and if not, there will be a surface electric railway for the purpose of providing transportation, not only to the park and its surrounding territory, but also for League Island Navy Yard. The steam railroads are to unite in a freight belt line which crosses Broad street extension at the south border of the park, and the Broad street parkway is to be filled to a height sufficient to carry it over this freight railroad. Advantage is to be taken of the height as a means of commanding the views to create an ornamental plaza, where there would ordinarily be simply a bridge over the railroad. The west half of the park will be improved in the ordinary park landscape style, with an irregular lake, curving drives and walks, gently undulating lawns, masses of shrubbery and border plantations. The east side of the park will be developed more simply into a great meadow for ball games and the like, and surrounded by walks, drives and border plantations.

I am myself engaged on a preliminary report for a comprehensive system of parkways in Essex County, N. J., there being

a recognized need of pleasure driving connections between the various parks and reservations which have already been provided at a cost of over \$5,000,000. The difficulties and expense incident to securing a complete system of parkways are such that it may well be doubted whether the county can afford to go very extensively into the matter within the next few years, and some portions are very likely to become impossible of accomplishment later owing to the increase of private improvements.

JOHN C. OLMSTED.

Brookline, Mass.

* * *

The Park Board of Utica, N. Y., has the last two years extended the boulevard one mile and three-quarters further easterly to connect all the parks in the eastern end of the city and to connect with Rutger boulevard, the main artery for auto trafficking between the extreme eastern end of the city and the center of the business district.

The board has accomplished a vast amount of ground work in Roscoe Conkling Park, including the installation of sanitary closet and sewage system in the beautiful Bronx-like woods of said park; the construction with gravel of three miles of the drives of park having the worst grades; a vast amount of native planting and also some natural planting of nursery stock and trees, such as black walnut, catalpa and elm and Norway maple. A great deal of underground draining has also been done, and band stands and shelter houses, children's play fields and tennis courts have been constructed.

The board has done much to create interest in trees and in tree protection by instituting an Arbor Day for all the school children, by letters to the papers on the subject of insect pests, etc.

Land values have increased enormously along the boulevard, in some cases at least 600 per cent in three years.

E. M. SWIGGETT,

Utica, N. Y.

Supt. of Parks.

(To be continued.)

ASKED AND ANSWERED

An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

Price of Lodge Burial Plots.

Editor Asked and Answered: We are trying to get a lodge here to make a contract with our cemetery to use a certain block as their burial plot, but some of the lodge members think that our price, 50 cents per square foot, is too high. Please quote us prices of different cemetery lots that you may be familiar with.—M. B., Tex.

We would not sell a lodge or secret society a lot in Crown Hill Cemetery, large or small, for any less than the individual at the minimum price of 50 cents, our maximum being \$2. At my old home some three years ago, I sold the Order of Elks a lot 1,200 square feet at 60 cents per foot

(that was at Columbus, Ohio). If the cemetery is a well-kept, modern one, I think that ground at 50 cents is very reasonable.

J. J. STEPHENS,

Supt., Crown Hill Cemetery.
Indianapolis.

* * *

Our lowest price for lots is 50 cents per foot. Our neighbor, Bellefontaine, charges \$1 per foot as lowest price. In the eastern cemeteries the price is still higher. The price of ground in cemeteries depends a good deal on location and other circumstances.

M. P. BRAZILL,

St. Louis. Supt. Calvary Cemetery.

There are certain conditions governing all cemetery lots, whether for lodges or private use, that should be considered. One of these conditions, which is the most important of all, is the future care of the lot. This future general care does not necessarily mean special care, such as watering, planting flowers, etc., but only such items as cutting and trimming the grass and keeping the lot in a clean and respectable appearance, the filling and resodding of graves, etc. A purchase price of 50 cents per square foot will not permit this. Some years ago Cave Hill Cemetery sold lots at 50 cents per square foot, but experience has forced up our minimum priced lots to \$1 per foot, and 20 per cent of this is laid aside in a sinking fund. We now sell lodges lots on the same basis as private purchasers, the Elks purchasing a lot of 2,306 square feet recently at \$1.10 per square foot. This price insures perpetual general care for this plot, just as all private lots receive. Such institutions as are of a purely eleemosynary character are given a special low price on lots and nothing is charged for interments. We see no reason why a fellow member of a lodge should be buried in a cheap lot any more than a member of one's family. All lots should receive perpetual general care, and if your correspondent can give this for 50 cents per square foot he must be located in an ideal place, as Cave Hill Cemetery could not do it. However, the price of labor will have a decided bearing on the cost of care. Our lots are sold for \$1, \$1.10, \$1.25 and \$1.75 per square foot, and this we consider a reasonable price for Louisville, Ky.

ROBT. CAMPBELL,

Supt., Cave Hill Cemetery.

Louisville, Ky.

* * *

Constitution and By-Laws.

Will you kindly inform me where I may be able to secure a copy of the constitution and by-laws of some cemetery association?—P. K., Ill.

The best way to get a form that would suit your state laws, your size and local conditions, would be for you to write to several cemeteries in your state in towns of about the same size as yours, and study their forms. No doubt any of the superintendents would be glad to send you copies of their constitutions and rules.

* * *

Elks' Monuments.

Editor PARK AND CEMETERY: We have cuts taken from your magazine showing monuments erected by the Elks in different parts of the country and find they have been very useful in selling lots to lodges. We write to ask you if you ever published a magazine showing cuts of monuments erected by other orders, namely, Eagles, Moose, Masonic, etc.? If you have, we wish you would send us either the magazine or the cuts.—R. H. Cem. Co., Pa.

We are sending you copies of our other

publication, the *Monumental News*. We do not publish any collection of designs particularly adapted to the use of lodges, but have published many designs of memorials of this character from time to time in the *Monumental News*. We believe it will be well worth your while, if you are interested in this character of work, to read the *Monumental News* regularly and save the designs that appeal to you as being useful.

* * *

Prices for Foundations.

Editor Asked and Answered: What do you consider a reasonable charge for building foundations, and just what details are included in foundation construction?—J. B., III.

We have recently revised our prices for foundations as follows:

Six cubic feet or under, \$3.

Seven cubic feet to twenty cubic feet, 45 cents per cubic foot.

Over twenty cubic feet, 40 cents per cubic foot.

These prices include excavating and sodding around stone after the same is in position. For piling and bridging over two or more graves, extra charges are made. When forms are required in which to put the concrete, the lumber and labor consideration is an extra charge. All our foundations are made of concrete, using crushed

stone or clean gravel from all sizes that will pass through a mesh not larger than one inch nor smaller than a half inch in the following proportions:

Five parts of gravel or crushed stone.

Two parts sand.

One part Portland cement.

All our foundations are put down to a depth of six feet, except for small markers at graves, which are set on foundations only three feet deep if there is sufficient solid earth on which to build the same. We are now using only "flush markers"—that is, a marker of uniform size, 12x24 inches on top and six inches thick, with a batter of one inch in the six inches, so that the marker will set on top of the foundation, and the frost as it rises will push away from the marker, the sides of the same being dressed so that there is nothing for the frozen ground to take hold of. The top of the marker is flush with the sod.

After carefully figuring our work for a considerable period, we found that it was hardly possible for us to do this work for less than the prices noted above, except it might be in very large foundations and when machines were used for the mixing. We have recently added to our equipment a "Little Wonder" power mixer, and we find this a very great addition to our facilities, although we have not had any large foundations on which we could make com-

parisons with the cost of work done previously by hand.

W. H. DRUCKEMILLER,
Sec., Pomfret Manor Cemetery.

Sunbury, Pa.

* * *

Concerning charges for foundations for monumental work, we make a uniform price of \$1.50 per square foot, surface measure, with no foundation to cost less than \$3. All foundations go to the bottom of the grave, which is five feet. As local conditions vary so greatly, it would be hard for me to give an estimate of what would be a fair charge in other cemeteries. A large part of the material excavated in digging foundations in our grounds is clean, water-washed gravel, which can be mixed one part of cement to five parts gravel, and makes a very strong foundation at a reasonable cost. If it were necessary for us to furnish crushed stone or sand the most would be much greater, and I should feel that the cemetery were justified in charging a higher price. We find it much cheaper to build our smaller sized foundations with cement concrete, but in the larger sizes use considerable ledge stone laid in separate layers and bedded thoroughly in concrete.

H. WILSON ROSS,
Newton Cemetery.

Newton Centre, Mass.

GROUP OF ARTISTIC CEMETERY MEMORIALS

In the Hebrew Cemetery at Baltimore are six memorials that take high rank as specimens of cemetery art and have aided substantially in elevating the standards of monumental work in this burial ground.

The six memorials which are illustrated here are the work of Ephraim Keyser, the Baltimore sculptor, who is instructor in the Rinehart School for Sculpture in that city.

The Simon Stein monument is Egyptian in character and is executed in dark Quincy granite, polished. Deeply recessed in high relief is a bronze tablet on which in high relief a life-size seated figure of "Grief" is most successfully depicted. The long sweep of the wings almost enveloping the figure, the relaxed droop of the head on the inverted torch, combine with the heavy, curved granite cap of the monument to emphasize the expression sought.

The Michael Stein monument, Greek in its architectural motif, is cut in dark Quincy granite, unpolished. In the die block there is a bronze tablet with a life-size nude seated figure of a boy holding a palm branch and looking toward a six-pointed star (the emblem of the shield of David), in which there is the Hebrew word signifying "Hope," which the figure typifies.

The Burgunder tomb is also executed in

polished dark Quincy granite. On the bronze tablet in high relief there is a figure, slightly over life size, of "Resignation." The drapery, arranged in long, simple folds, adds to the impressiveness of the work.

On the Lauer monument Mr. Keyser has tried a rather unusual scheme. The architectural motif is of the simplest form. Polished Milford pink granite is the material used, which forms the background for the low relief bronze figure and accessories set in the granite about one-fourth of an inch, and the effect is remarkably good. It shows a figure somewhat over life size hanging a garland of evergreens on a tripod on which stands a seven-branched candelabra, the central flame enlarged and treated conventionally. "Keeping the flame of memory green" is the thought that is well expressed in this work.

Mr. Keyser being an advocate of cremation, has erected the family columbarium in this cemetery on the lot where his parents are buried. He has fully utilized the space at his disposal, the width of the lot being but 10 feet and the base of the structure 9 feet 10 inches. There are two steps, 15 and 12 inches wide and 6 inches high. The dimensions of the columbarium, exclusive of the steps, are: Height, 8 feet; width 5 feet 4 inches; depth, 2 feet. It is constructed of Maine pink granite and the

divisions and slabs on the interior of polished Tennessee marble. These are 24 inches, each 10½x8¼x8 inches.

The bronze door is 6 feet 6 inches high by 2 feet 10 inches wide. The 6-foot figure in low relief stands with hand on the knob, hesitating on the threshold of the tomb to deposit the casket which she clasps to her breast, half hidden by the flowing hair which also shadows the face.

Depth of feeling and simplicity of line, both in the figure and the whole work, is its distinguishing quality.

The Benesch monument is in the form of an exedra. The broad, curved seats flank a pedestal 5 feet high, on which is a bronze figure "In Memoriam," 7 feet high. The extended hand is dropping a flower whilst a bunch of long-stemmed roses are held clasped to her breast. The figure is very dignified and the lines of the drapery flow in harmony with the architectural features. Light Barre granite is the material. The extreme width is 15 feet; height, 12 feet.

The three monuments of Quincy granite were cut by John Thompson & Sons, of Quincy, Mass. The other three by Clough & Malloy, in their granite yards in Baltimore. The bronze castings were all done by Bureau Bros., of Philadelphia.



MICHAEL STEIN MEMORIAL.



LAUER MONUMENT.



BURGUNDER TOMB.



BENESCH EXEDRA-STATUE MEMORIAL.



SIMON STEIN MONUMENT.



KEYSER COLUMBARIUM, OPEN.



KEYSER COLUMBARIUM, CLOSED.

STOCK CEMETERY MONUMENTS OF POOR DESIGN



FIG. 4. CROSS DESIGN SPOILED WITH ROCK-FACED WORK.

In all complete monuments there must be a complete sense of harmony of parts

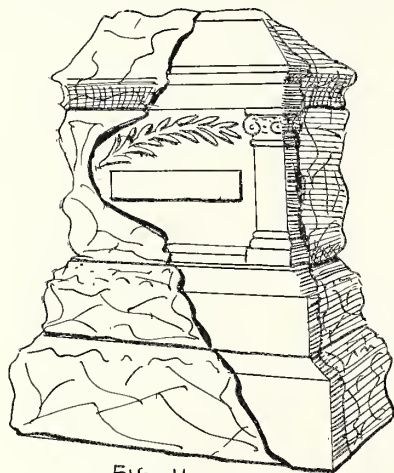


FIG. 11. THE SEMI-FINISHED HORROR; AN ABORTION IN DESIGN THAT OUGHT TO BE RETIRED.

in their individual forms. They should be so related to each other as to convey the

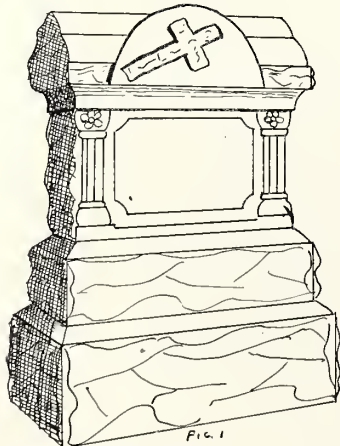


FIG. 1. TOO MUCH BASE, BAD DECORATIONS, POOR PROPORTIONS AND AN OVERDOSE OF ROCK WORK.

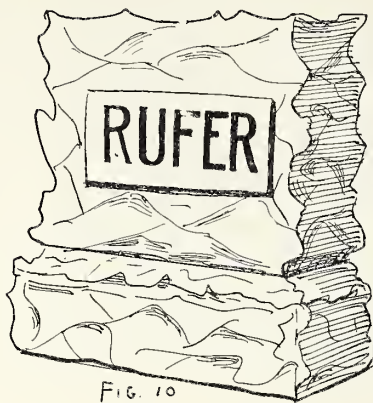


FIG. 10

ONE OF THE JAGGED IMITATIONS OF WAVES; SELDOM WELL-CUT, NEVER ARTISTIC AND MUCH OVERWORKED.

agreeable impression of harmonious lines and masses. There must also be a fitness both in form and in function of the various parts.

The faculty of understanding and appreciating beautiful forms and lines can be cultivated by study. In designing monuments the different parts can often be made more beautiful by a little alteration in proportions or in the curves.

One of the worst types of monument is seen in Fig. 1. There does not seem any excuse for such proportions as these. The die is the only member that has a good contour, and that is spoiled by adding the columns at each end. The cap is wholly abnormal in every measurement, and to make the appearance much worse parts are left rock-faced. Both bases are nothing more than inside wall building stones of entirely wrong proportions for monumental use. See how much different this can be designed by slight changes and by discarding the rock face. It is always much better to represent beauty than bigness and cheapness.

Fig. 3 shows another just as bad. No part of this could be called beautiful. The hideous die was cheapened by leaving the wide rock-face margin around the edges.

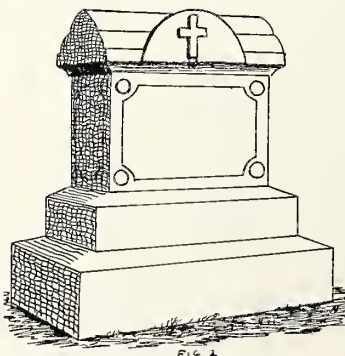


FIG. 2. A REVISED FORM OF FIG. 1.



FIG. 13

A LITTLE EXAGGERATED, BUT NOT MUCH WORSE THAN SOME OF THE "WHAT-IS-ITS" THAT DISGRACE THE POLISHED BALLS THAT SURMOUNT THEM.

Note the building blocks under it, just about as they were quarried. No cemetery association should allow such an abor-

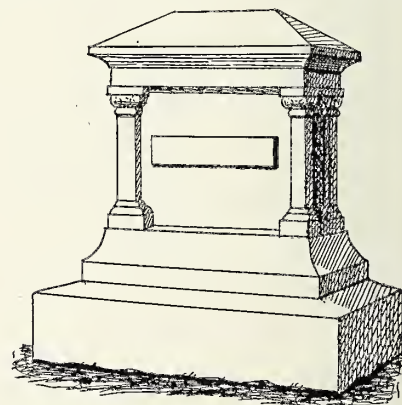


FIG. 12. A REVISION OF FIG. 11, FINISHED AS IT SHOULD BE.

tion to enter the grounds. This, of course, can be arranged to look a little better by

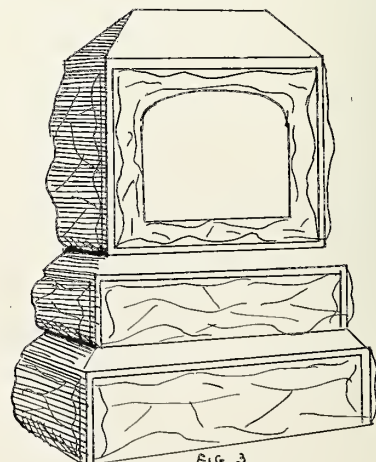


FIG. 3

FIG. 3. POOR ROCK-WORK AND BAD PROPORTIONS.

merely cutting away the rock work and making a plain job. But haven't we had square blocks long enough and are our designers not capable of something better?

Another unthinkable pile of stone is seen in Fig. 4. This is also from a monument design book. The cross is very badly out of proportion and defaced by rock work. The little vine seems lost in a pile of grout. The piece of rough stone below it has not a particle of shape, and the two bases have not had much done to them since they left the quarry. One might say, Why desecrate the cross form by throwing grout around it?

There are other poor types of crosses, with the faces polished or otherwise finished and the sides left rough. These are generally, like Fig. 4, illustrated, very badly designed and have rock-face bases. This job would look much better when the proportions of the cross are corrected; also by placing under it a decent base, well cut. These cross jobs look as if they were never designed on paper, but were given a workman to cut from the office boy's measurements.

There should come a time soon when men who do not know a well-proportioned

monument will leave designing alone, and as soon as it is understood that it is impossible to have an eye and brain judgment for proportion without being trained to artistic appreciation, better monuments will result.

There are plenty of trained men who are capable of designing good proportions and decorations who have turned their attentions to other branches of design because of the poor specimens of art in monuments. Many retailers who have gone into monument selling from some other business do not understand that they are not only dealing with durability, but also with beauty, which can be made only by art training. The dealer should make his stock more artistic. There are books and magazines, too, that would give him better artistic understanding in selecting designs that would help to make beautiful cemeteries. Rock monuments are generally the very crudest forms we have. It does not require artistic intelligence to design them nor to cut them. No dealer can claim they are beautiful; he can only tell the customer it is very large for such a small price.

Fig. 10 is a fair sample of the thousands in stock; just a large cobblestone

with some letters on it. The only art in connection with it is the art of the traveling crane or derrick which lifts it around. They continue to be sold because of the material, which is disgraced by such designs.

Fig. 11 is one of many similar designs supposed to represent the unfinished life. Only one corner and part of the face have been cut, the rest left as it came out of the quarry. An attempt has been made to use a good design of fairly good proportions, but the rock work has spoiled it. The work as it should be is seen at Fig. 12. All sides have been finished, the columns have been drawn in length in proportion to their height, and the second and bottom bases have been overhauled by diminishing the height and widening the washes.

Fig. 13, taken from a prominent design book, is another extreme attempt at monument building. There is absolutely no sense of proportion in any of its measurements. It has no memorial meaning of any sort. Such shapeless stones fit only for guide posts on country roads. There is only one road to better monuments, and that is through more artistic designs. The public will learn about them, and the dealer who does not show them will be left behind.

LAST CHAPTER IN MAUSOLEUM PATENT CASE

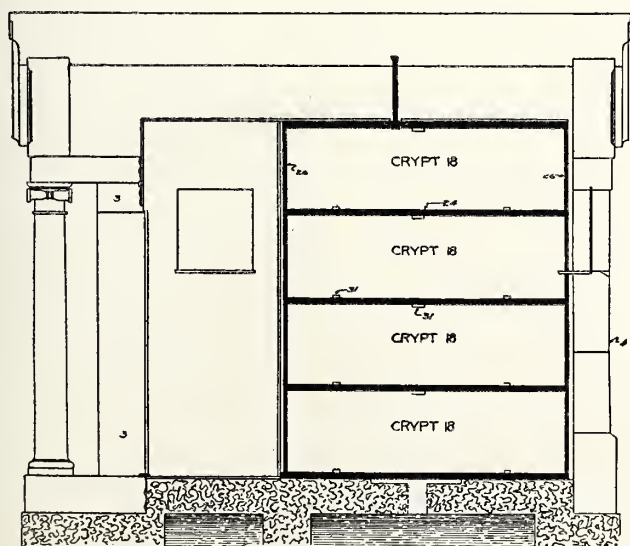
The last chapter in the famous Knight-Rieger mausoleum patent suit that has been in progress in Baltimore for several years was written February 3, when the United States Circuit Court of Appeals handed down a decision affirming the judgment of the lower court in invalidating the alleged patent of Maurice L. Knight.

The complete history of the suit, descriptions and illustrations of the mausoleum and much of the evidence has already been given in these pages.

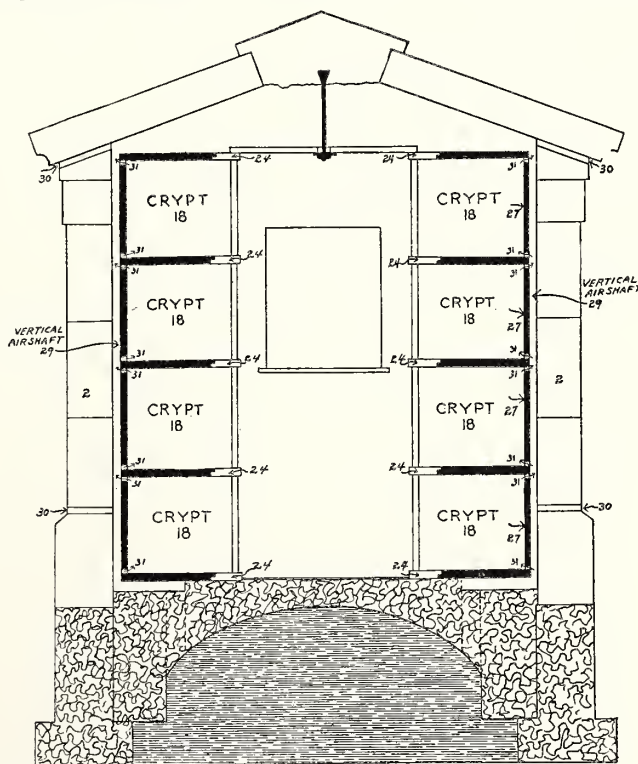
The decision of the Court of Appeals, handed down by Judges Pritchard, Knapp and Woods, was as follows:

The patent in suit, No. 979,965, was issued to appellant, complainant below, on December 27, 1910, for a mausoleum. In the specification on which

his application was made he states that his invention consists of (1) "improved means for obtaining ventilation and drainage of the crypts or loculi in a mausoleum or vault," (2) "improved means for closing and sealing the crypts or loculi in a vault or mausoleum," and (3) "other novel features of construction."



LONGITUDINAL SECTION OF MAUSOLEUM ON WHICH INFRINGEMENT WAS CLAIMED.



VERTICAL SECTION OF MAUSOLEUM ON WHICH KNIGHT-RIEGER CASE WAS BASED.

The questions for decision then are simply these: Is the patent valid? If so, has it been infringed? In passing upon the first question we refrain from expressing any opinion as to the patentability of appellant's invention. The point is made and argued at length by appellees' counsel that section 4886 of the Revised Statutes requires the patentee to be a person who has "invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof"; that the only patentable inventions are those belonging to the classes enumerated in the statute; and that appellant's invention does not come within any of the enumerated classes. We prefer, however, to rest our decision upon other grounds, and therefore deem it unnecessary to discuss a defense which involves the controverted meaning of the statute rather than the actual merits of the invention for which the patent in suit was granted.

The mausoleum of familiar type resembles in some degree a miniature temple. As commonly constructed the door in front opens into a transverse vestibule which occupies the width of the structure. An aisle or corridor extends at right angles from the vestibule to the rear wall of the mausoleum, and on each side of the corridor are crypts or loculi placed one above the other. These crypts are oblong stone or slate boxes, each of sufficient size to contain a burial casket, and the casket is placed in the crypt through the side which is toward the interior of the mausoleum. The opposite or back side of the bank of crypts is parallel with the inner face of the external wall of the structure.

The method of construction described in the patent is designed to afford means of ventilating and draining the crypts into the open air, while preventing the escape from them into the interior of the mausoleum of the gases or liquids resulting from decomposition. For the purpose of ventilation the patent directs that there shall be a space of some inches in breadth between the back walls of the crypts and the inner side of the wall of the mausoleum. In each crypt are apertures or vents, one or more on the plane of the upper surface of the bottom of the crypt and one or more near the under surface of its top or cover, and these vents open into the air space between the crypts of the mausoleum wall. The latter is pierced with one or more openings at or near the surface of the ground and one or more at the top of the wall. It is also stated to be desirable to have ceiling fit closely upon the top of the crypts and to leave between it and the roof proper an air space connecting with the vertical air chamber mentioned. On the side next to the corridor the crypts are closed tightly with a suitable slab or wall to prevent any escape of offensive gases into the interior of the mausoleum.

Coupled with this means for obtaining ventilation and drainage of the crypts is the provision for interlocking or securing the back edges of the horizontal shelves, which form the tops and bottoms of the crypts, in or to the wall of the mausoleum, thus securing a solid, connected and durable structure. The ventilating feature is preserved by cutting out of the rear edges of each shelf for the greater portion of its length a rectangular strip of the approximate width of the vertical air chamber. This rectangular cut is shorter than the length of the shelf, so that there is left at each end a projection which bridges the air chamber and is secured to or interlocked with the mausoleum wall. In the language of the patent, "the back edges of the shelves are secured in the inner faces of the walls and interlocked with them, excepting at the openings forming the air flues."

In the structure which is claimed to be an infringement no part of the shelves referred to extends across or into the air chamber. Instead, as appellant alleges, the back or inner edges of the shelves of the crypts are connected with the mausoleum wall by blocks or filler pieces arranged in pairs and fixed in cement, with suitable wiring, so that when the structure is completed and the cement hardened the shelves become permanently joined with the side wall to substantially the same extent as and in practically equivalent fashion to, the projecting portions of the shelves of appellant's device. In other words, appellees' method is claimed to result in the same rigid and durable connection between the bank of crypts and the mausoleum wall. The appellees deny that their method of construction is of the character just described, but on the contrary say that what they do is to place a number of bricks or other substances in the air chamber between the back wall of the crypts and the inner face of the mausoleum for the temporary purpose of holding the crypts

in place during the process of construction, and that such supports are in no sense a part of the permanent structure. The means of ventilation and drainage appear to be substantially the same in both structures.

But precisely what are the "old devices" which he has combined? He disclaims contending "that there was any invention *per se* in attaching a shelf to a wall, or that the patent in suit involved as its salient feature such securing of a shelf to a wall." But apparently this form of construction must be one of the elements or "devices" which enter into his combination. Otherwise, it would not be so strenuously contended that appellees' method, or alleged method, of connecting the crypts with the mausoleum wall produces the same result as appellant's method and should be held to infringe his device. Indeed, it seems evident that appellant regards his plan of projecting portions of the shelves to be secured in or to the mausoleum wall, or some similar contrivance, as one of the factors of his invention. But the only other factor or element, so far as we can perceive, is his system of ventilation and drainage, and this system is not shown to possess any feature of novelty which of itself would be entitled to a patent. Nothing else is pointed out as indispensable to or forming an integral part of the combination.

We say that appellant's plan of ventilation and drainage exhibits no novel features, because we are satisfied beyond a reasonable doubt that the fact was so established. The evidences of record show clearly that for a number of years at least before appellant applied for his patent, mausoleums had been actually constructed, or described in patents already issued, with a vertical air chamber between the superimposed crypts and the mausoleum wall, with apertures or vents from the crypts into the air chamber, and with openings from the latter into the outer atmosphere. These are the three essential parts of appellant's design, and none of them singly or all of them in combination originated with him.

The patent in suit therefore must rest upon the asserted novelty of combining means of ventilation and drainage, which are not new, with that form of construction, which is also not new, by which the shelves of the crypts are in some permanent man-

ner fastened to or interlocked with the wall of the mausoleum. But the difficulty here is that the elements in question, whatever particular form either may assume, do not interact or co-operate with each other to produce the common and desired result. Though both are employed in the described structure, they do not appear to be mutually dependent. Obviously, the same means or method may be employed for obtaining ventilation and drainage, and those objects secured, without any permanent or substantial connection between the crypts and the wall of the mausoleum. It is equally evident that the crypts and mausoleum wall, though placed somewhat apart, may be united in such a solid and enduring manner as to be practically one structure, without providing either ventilation or drainage. In the former case the bank of crypts would not only rest upon a separate foundation but be throughout independent of support from the exterior wall of the mausoleum. In the latter case openings would have to be made in the connecting material, like the rectangular cuts in the projecting shelves of appellant's device, in order to secure ventilation and drainage. In other words, as appears to us, appellant merely brings these two factors into juxtaposition and concurrent use, but does not in fact produce any new or novel combination within the meaning and intent of the patent law. As we see the matter, it comes in reality to the question of the relative desirability of different modes of construction nether of which involves any display of inventive genius.

This conclusion is supported by numerous cases which we have examined and which appear to us controlling. Among these are *Hailes v. Van Wermer*, 87 U. S. 368, where the doctrine is stated plainly:

The earnestness with which appellant's claims are pressed in brief and oral argument has led us to give them the most careful consideration; but we are unable to find in the record before us any basis of fact which distinguishes this case, on any recognized or tangible principle, from the cases just cited and others of like import in which similar conclusions have been reached. We are satisfied that the decision of the court below was correct and the decree appealed from is therefore affirmed.

BOOKS AND PUBLICATIONS REVIEWED.

"The Practical Book of Garden Architecture," by Phoebe Westcott Humphreys, just published by J. B. Lippincott Company of Philadelphia, is one of the handsomest and most useful of the fine garden books that have been published in years. The book treats in a simple, practical, informative way of every type of garden and landscape construction, and is equally useful and suggestive to the private owner of large or small grounds, or to the professional gardener or landscape architect. It is beautifully executed typographically, with a frontispiece in color and 125 illustrations from actual examples of garden architecture and landscape construction. This volume has been prepared from the standpoint of practicability, the best taste and general usefulness, and is equally suited for modest or extensive garden construction in public or private grounds. The book contains 330 pages, is handsomely bound in cloth and sells for \$5 by the J. B. Lippincott Company of Philadelphia.

The Department of Agriculture has just issued Bulletin No. 13 on "White Pine Under Forest Management," by E. H. Frothingham, an illustrated book of 70 pages. This bulletin summarizes the most important facts relative to white pine, with regard both to the original forest and to the second growth. The yield tables for second-growth stands presented in the bulletin are based on measurements made in

southern New Hampshire by C. A. Lyford and Louis Margolin. These may be considered as roughly applicable to second-growth stands throughout most of the range of white pine. From them have been derived tables showing the value of stumpage at prevailing prices and the profit or loss resulting from the management of second growth under favorable and unfavorable conditions. Methods are also suggested for securing successive crops and for increasing the quantity and quality of the yield. The chapters on "Direct Seeding" and "Protection" are from an unpublished report on white pine by A. K. Chittenden and J. S. Ames.

"The Advancement of Alton" is a most interesting general report on a city plan study for Alton, Ill., recently made by Charles Mulford Robinson, of Rochester, N. Y., for the Alton Board of Trade. The book contains 48 pages, with a number of photographic illustrations and diagrams, and is divided into the following sections: The General Survey; Railroads and River; The Street System; The Park System; Administrative and Miscellaneous.

The Austin Tandem Motor Roller is described and illustrated in detail in a new 16-page booklet just issued by the Austin-Western Road Machinery Co. of Chicago. It shows detailed pictures of parts and interesting pictures of motor rollers at work on roads.

The Semet-Solvay Co., Syracuse, N. Y., has issued an interesting 36-page booklet illustrating many specimens of roads in parks and cemeteries that have been treated with granulated calcium chloride, and describing in interesting text the use of this popular dust-layer.

OHIO CEMETERY CONVENTION.

The Ohio Association of Cemetery Superintendents and Officials has planned a most interesting annual convention to be held at Ravenna, June 24 and 25, with headquarters at the Coit Hotel.

Following is the program:

WEDNESDAY AFTERNOON, JUNE 24.

Meeting called to order at Cemetery Chapel, 1:30 p. m.

Prayer, Rev. J. W. Dowds; welcome address, Mayor Walter Lyon; response, Fred I. Sloan, Ironton, Ohio.

Roll-call; application and reception of new members.

President's address, R. E. Gifford, Ravenna.

Reading of secretary's report; communications; payment of fees and dues.

Paper, "Tombstones," Mr. George F. Titus, Norwalk, Ohio. Discussion of same.

Report of delegate to national convention. Mr. George Gossard, Washington C. H., Ohio.

Question box. Appointing of committees on auditing, location, resolutions; inspection of grounds.

WEDNESDAY EVENING, JUNE 24.

Dinner at 7 p. m. by Ladies' Cemetery Association at Foresters' Temple.

8 p. m.—Program of special music and speeches.

THURSDAY MORNING, JUNE 25.

9 a. m.—At Coit House, auto ride.

10:30 a. m.—Meeting called to order at Foresters' Temple.

Paper, "Renovating an Old Cemetery," Charles Crain, Tiffin, Ohio. Discussion of same.

Paper, J. R. Florence, Circleville, Ohio. Discussion of same.

New business. Adjourned to 1 p. m.

THURSDAY AFTERNOON, JUNE 25.

1 p. m.—Foresters' Temple.

Paper, "Horticulture," Mr. Ernest Muny, Cleveland, Ohio. Discussion of same.

Report of National Committee on Community Mausoleum, O. G. Harmon, Ravenna. Discussion of same.

Report of committees and election of officers. Unfinished business. Good-bye.

This State Association is in a thriving condition and much interest seems to be manifested in the coming meeting.

It is the purpose to try and interest all cemetery men of the state in this work. Much has been done in the past to improve the cemeteries of Ohio by this association and the interest is increasing more and more each year.

E. A. Sloan, of Marion, is secretary of the association.



Harry Smith, secretary of the Board of Park Commissioners, of Louisville, Ky., has been flooded with requests of varied character since the announcement in a recent decision by the Court of Appeals that the board had supervision of trees along streets and sidewalks of the city. The board has been asked to cut down dead trees and live trees, to trim trees and furnish and plant trees of specified variety. "The board cannot keep a crew of men to do this work, though they would like very much to," said Mr. Smith. "Provision is made only that the board shall authorize the planting or trimming of the trees, or condemn them. The individual must have the work done and pay for it."

Situated at the confluence of four streams in the beautiful Miami Valley where Stillwater, Mad River and Wolf Creek flow into the Miami, and surrounded by picturesque hills, Dayton, Ohio, has excellent natural advantages for a fine park system, and if the system that has been outlined in a recent report by Olmsted Prothers is adopted, this city, with its wide streets, attractive concrete and steel bridges, boulevard system of lighting and handsome buildings, will, it is believed, rank second to no inland city of 130,000 population. Under the new form of city government many Dayton people hope to see an interest manifested in parks and playgrounds such as they consider in keeping with its reputation as a manufacturing and mercantile center. The new commissioners are expected soon to have the plan of the city beautification printed and to enter on a campaign of education to awaken Dayton's citizens to the importance of adopting it. If this plan is adopted and its provisions carried out, Dayton will have twenty-six playgrounds, comprising 230 acres; nine small parks, aggregating 216 acres, and four large parks of 1,060 acres, a total of 1,506 acres. In addition to this there will be nineteen miles of parkways, nine of which will be along the Miami, Mad River and Wolf Creek, and ten miles of circumferential parkways.

New Parks and Improvements.

The Parks and Boulevards Commission of Kalamazoo, Mich., has asked the City Council for an appropriation of \$10,574.50 for the park work for the present season. The present recommendation of the board provides for extensions of the work on every park, grading and beautifying the grounds about the water towers, and the construction of new greenhouses to replace the present ones at Riverside Cemetery, which have been condemned. An appro-

priation of \$2,500 for the new structures was asked.

The City Park Board of Dallas, Tex., has decided upon the purchase of a lot 60x180 feet to be added to the new park on Carroll and Worth avenues.

The Council Committee on Goodale Park, Columbus, Ohio, asks for an appropriation of \$3,000 to be used in carrying out a general improvement scheme in the park within the next few weeks. W. A. Hogle, assistant in the engineer's office, consulted with members of the committee on the contemplated development of the park.

The village of Wood River, Ill., is to have a public park of fifteen acres. On the tract are some oak trees of good size and about a carload of trees will be purchased and set out on the grounds.

From the Park Reports.

The annual illustrated report of the Park Department of Cambridge, Mass., notes that the development of the playground system is one of the most important problems that will confront the Board of Park Commissioners the coming year. It is the intention of the commissioners to develop six large and up-to-date playgrounds. An important event in the history of the city was the completion last year of the new athletic field, built for the use of the school boys of Cambridge. Two thousand five hundred private estates were cleaned of gypsy and brown-tail moths during the winter months. Two thousand seven hundred and fifty trees were cleaned. Although both these pests are on the decline in this city, it is still necessary to go over the ground just as carefully as heretofore in order to prevent a recurrence of the trouble. All the trees were sprayed with arsenate of lead in order to destroy the elm-leaf beetle. This treatment has been very successful. The leopard moth still continues to spread and is doing a great deal of harm to the trees. No successful remedy has as yet been found to combat it. John F. Donnelly is superintendent of parks and B. F. Sullivan supervisor of playgrounds.

The annual report of the Park Commissioners of New Bedford, Mass., contains a report in detail of the receipts and expenditures and an account of the maintenance and improvements during the year. The appropriation by the City Council was \$45,000. The expenditures of the year amounted to \$45,661.39, exceeding the appropriation \$661.39. Of this amount, \$21,927.01 was paid for labor and \$23,734.38 for materials and the maintenance of the parks. The purchase of the Howland land



SECTION OF FENCE FOR YELLOWSTONE NATIONAL PARK.

at an expense of \$19,332.29, consisting of about eighteen acres of woodland, made a substantial addition to the park system. New Bedford has seven public parks, comprising a total area of 217 acres 29.07 square rods. Brooklawn Park has received a generous part of the appropriation for improvements this year. A handsome shelter house, containing all the necessities and conveniences desired in such a place, has been constructed. The building is of wood, but very ornamental. The roof projects over the outside walls and is covered with red asbestos century cement shingles. The inside dimensions are 50x25 feet. William F. Caswell is secretary of the Park Board; Thomas W. Cook, general superintendent, and George H. Nye, consulting engineer.

Charles Mulford Robinson, of Rochester, N. Y., has prepared an interesting general report on a park system for Council Bluffs, Ia., from which we quote briefly as follows:

"It seems to me that there are six general principles which almost anyone would be ready to accept, as properly governing the selection of park lands for Council Bluffs. They are as follows:

1. Some of the best typical scenery should be preserved.
2. The parks should be so distributed as to serve all parts of the community.
3. Their location, and to such extent as practicable their size, should anticipate the city's growth.
4. Other things being equal, lands which are of no great value for building should be selected.
5. The parks should invite use, in the sense of performing an active social service. They should be created sparingly, if at all, for purely aesthetic purposes.
6. There must be due regard for financial limitations.

Measured by the test of these principles, Council Bluffs has already park possessions of extraordinary merit. In Fairmount and Dodge parks, some of the best

typical scenery of the locality is preserved, through their utilization of the two dominant, and well contrasted, topographical characteristics—the bluffs and the river. The large parks are also distributed so as to serve the different parks of the city—Fairmount on the east, Dodge on the west, Lakeview Park on the north, and far to the south, Island Park. The geographical distribution of the present parks anticipates the growth of the city in any direction. Should the increase in population be east, west, north or south, there is available a large park acreage."

FENCING YELLOWSTONE PARK.

The illustration shows a section of iron fence recently erected at the Yellowstone National Park. The section shown here is near the north line of the park and includes 2,000 lineal feet of the fence, 5 feet in height, including one 16-foot double drive gate and one 4-foot walk gate. The wrought steel pickets are $\frac{3}{4}$ inch square and the two channel rails are each $2 \times \frac{5}{8}$ inches. The fence was furnished and erected by the Enterprise Iron Works of Indianapolis, Ind.

CEMETERY NOTES

New Cemeteries and Improvements.

The yearly report of Secretary R. N. Elliott, of the Dale Cemetery Association, Connersville, Ind., shows that association to be in a very satisfactory condition financially. The Executive Committee, consisting of W. M. Gregg, superintendent of the cemetery, and R. T. Huston, was authorized to build a rest house of brick with slate or tile roof in bungalow type of architecture.

A number of soft maples and other ornamental trees have been ordered by Service Director J. J. Grafton, of Spring Hill Cemetery, Wellsville, Ohio, for planting in reclaimed portion of the burial ground.

Steps are to be taken at once to restore the old Elyton Cemetery in Birmingham, Ala., which is in a very unsightly and neglected condition. M. T. Porter, Sam E. Greene and Judge W. M. Walker are interested in the movement. It is planned to erect a concrete wall, wire fence or privet hedge around the cemetery.

It is the purpose of the Springfield Cemetery Association, Greenville, S. C., to beautify and to keep beautiful the burial place.

The City Council has appropriated \$10,000 for improvements in the cemetery and the association has arranged to employ an experienced gardener. R. McHardy Mauldin is secretary of this association.

The Weldon Cemetery Association, Weldon, Houston County, Tex., has been incorporated by H. Leggett, J. L. Carroll and J. S. Duke.

A cemetery association of which E. L. Kelly and H. C. Myers are the promoters is being formed to establish a burial ground in Youngstown, Ohio, consisting of about sixteen acres.

It is planned to build a chapel in the City Cemetery, Centralia, Ill., funds for which are being raised by the Ladies' Cemetery Association.

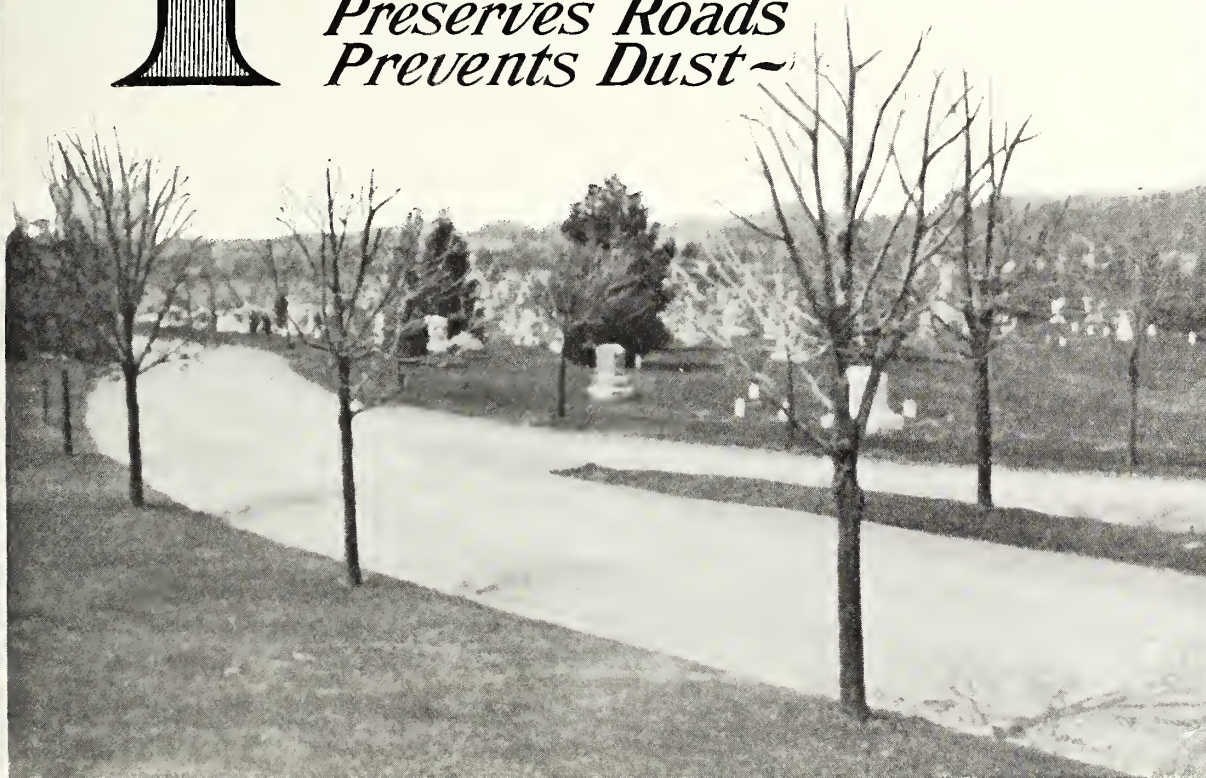
Godfrey Cemetery, Alton, Ill., has bought two additional acres of ground.

At a meeting of the St. Columba Cemetery Association, Ottawa, Ill., a contract for a large ornamental gateway at the entrance of the cemetery was awarded to Sinnott Bros., of that city.

Eighty acres have been purchased just outside the city of Augusta, Ga., by an

Tarvia

*Preserves Roads
Prevents Dust~*



National Cemetery, Arlington, Va., Treated with "Tarvia A".

Combination Sidewalks and Roads

FOR cemeteries, it is economical to have road surfaces suitable for pedestrians, thus eliminating sidewalks.

The cheapest, simplest and most satisfactory way to do this is to use tarviated macadam. Tarvia is a dense, viscid coal tar product used as a binder to fill the voids in a macadam roadway and seal in the stone in a tough, waterproof matrix. A tarviated surface is smooth, clean, waterproof and not slippery and in every way suitable for

pedestrians if kept clean. At the same time vehicles will not make ruts, horses' hoofs will not chop it up and heavy loads (monuments) will not crush it.

Tarvia can be used on old roads to reduce maintenance cost, and new roads can be built with it from the bottom up.

There are three kinds of Tarvia, and one or the other of them is applicable to every road problem.

Booklets on request.

BARRETT MANUFACTURING COMPANY

New York Chicago Philadelphia Boston St. Louis Kansas City Cleveland
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association of which W. S. Brand is the head, to be converted into a cemetery.

Work has been begun on the chapel to be erected in the City Cemetery at Centuria, Ill. It is to be of stone with terra cotta trimmings and two massive marble posts.

The Holley Grove Public Cemetery Association has been incorporated at Lena, Ill., by Thad Stevens, W. E. Bass and J. A. Loomis.

St. James Union Cemetery Association, Orangeville, Ill., has been incorporated by I. I. Baumgardner, Edward Wagner and Albert L. Barker.

Sand Spring Cemetery Company, Lawrenceburg, Ky., has been incorporated by J. C. Stratton, C. P. Harlow and D. F. Hanks.

The trustees of Kane Cemetery, Carrollton, Ill., are building a new fence on the east side of the cemetery and having the grass cut and the grounds cleaned off and plan to build a walk to the cemetery.

A new cemetery is to be laid out near Gethsemane and Woodlawn by the orthodox Jews of Lima, O. The new burying ground will be west of Woodlawn Cemetery.

The A. E. Holt Engineering and Construction Co., Kewanee, Ill., was awarded contract by the Board of Local Improvements for the laying of about 3,000 feet of piping in the new addition to Pleasant View Cemetery.

Application was made to the city by members of the Pioneers' Rest Cemetery Association, Fort Worth, Tex., for water in the cemetery, which is being improved by the association. New water pipe will be required in many parts of the cemetery.

C. W. Hughes, landscape engineer, has had charge of improving Rose Hill Burial Park, Corpus Christi, Tex.

From the Cemetery Reports.

The annual report of Fernhill Cemetery, St. John, N. B., notes that the directors have paid a great deal of attention to the preparation of new lots, and for the purpose of removing the rock in South and Central avenues have purchased a steam drill at a cost of \$451.46. A new fire hydrant was installed for watering purposes, and a system of uniform lot markers such as arc used in all modern cemeteries has been installed. The perpetual care fund now amounts to \$77,600.

Following are some statistics of the year's work from the annual report of Leroy Christie, secretary, Ottumwa Cemetery Association, Ottumwa, Ia.: Receipts from burials, \$1,119.75; care of lots, \$1,022.55; foundations, \$658.05; perpetual care fund, \$1,535.98; total, \$5,639.10. Amount in perpetual care fund last report, \$11,474.70. One thousand eight hundred and sixty-six feet of tile was laid at a cost of \$285.36, and there were built 40 rods of wire fence. Pathways were filled with earth from graves and while no account was kept of

the number of square feet filled, if it was all in one section it would complete any of the large sections. The McClung tract will be platted and staked this season under the supervision of S. W. Rubee, of Marshalltown, Ia. In addition to the improvements mentioned, they expect to put in 1,600 feet of concrete curb gutter on the west side of the cemetery at a cost of \$1,000.

MORE OR LESS PERSONAL.

At recent annual meetings of cemetery associations the following officers were elected:

Lawndale Cemetery Association, Lawndale, Ill.: President, Wm. L. Sulphin; secretary, G. J. Brearley.

Plattville Cemetery Association, Plattville, Ill.: President, R. J. Van Cleave; secretary, Fred Tremaine.

Fairview Cemetery Association, Joplin, Mo.: President, Henry Phelps; secretary, Hattie Ruddy Rice.

Cemetery Association, Rock Falls, Ia.: President, Jessie Wilkinson; secretary, Elizabeth Roebush. Many improvements are planned for the coming year.

Fairview Cemetery Association, Waterloo, Ia.: President, H. W. Grout; secretary, J. W. Krapfel.

Hawk Cemetery Association, Muncie, Ind.: President, Joshua Jester; secretary, D. L. Reynolds. Two acres of additional ground have been purchased.

Lyons Cemetery Association, Repatee, Ill.: President, Mrs. Hannah Karr; secretary, D. I. Foster.

Maquon Ladies' Cemetery Association, Moquon, Ill.: President, Mrs. F. C. Bearmore; secretary, Mrs. C. Scudder.

Hope Cemetery Association, Galesburg, Ill.: President, Dr. J. N. Standish; secretary, D. N. Strain.

Cascade Protestant Cemetery Association, Cascade, Ia.: President, B. F. Crawford; secretary, Thos. Kingsley.

Marion Cemetery Association, Marion, Ohio: President, S. E. De Wolfe; secretary, C. N. Phillips. Extensive improvements are contemplated for the coming year.

Dundee Cemetery Association, Dundee, Ill.: President, A. F. Chapman; secretary, E. A. Schmeltz.

Steptoe Park Association, Rosalia, Wash.: President, Mrs. F. J. Wilmer; secretary, Mrs. H. L. Totom.

Park Lawn Cemetery, St. Louis, Mo.: Charles Schroeder president, and Thomas J. Lavin, secretary.

The Cemetery Commission, Racine, Wis.: Andrew Hanson, president, and H. R. Ticknor, secretary. Louis Mohr is superintendent.

The Temple Cemetery Co., Temple, Tex.: President, Charles M. Campbell, and H. H. Swink, secretary.

The Ladies' Cemetery Association, Monmouth, Ill.: President, Mrs. R. S. Russell; secretary, Mrs. C. D. Watson.

Fairview Cemetery Association, Wilmar,

Minn.: C. A. Nelson, president, and Andrew Peterson, secretary. The Fairview Cemetery Improvement League, with Mrs. Pursley as president and Mrs. H. S. Peterson as secretary, has been organized to co-operate with the cemetery association, with a view to improving the cemetery generally.

James Burns, once a resident of Detroit, Mich., has been promoted to the superintendency of the national cemetery at Springfield, Mo. For several years Mr. Burns was a member of the Detroit police force. Then he became assistant superintendent of Elmwood Cemetery and later was made superintendent of the national cemetery at Hampton, Va. Subsequently he was transferred to Knoxville, Tenn.; Arlington, Va.; Grafton, W. Va., and Keokuk, Ia.

THE COVER ILLUSTRATION.

The fencing of large parks or estates or long boulevards demands especially careful attention both in the kind of fence selected and in its setting and care.

The first requirements are stability and strength, and a plain, substantial style of fence such as the one shown on the cover of this issue generally receives first consideration.

Every detail of construction and setting should be carefully looked after. When a long stretch of fence lines up as straight and strong as the one illustrated, it means that the designing and erecting has been thoroughly done by skilled, experienced hands from the blue print to the finished work.

This handsome length of fence is part of a long stretch of specially designed park fence furnished by the Stewart Iron Works Co. of Cincinnati, Ohio.

STATEMENT OF OWNERSHIP.

Statement of the ownership, management, circulation, etc., of PARK AND CEMETERY AND LANDSCAPE GARDENING, published monthly at Chicago, Ill., required by the Act of August 24, 1912:

Editor—O. H. Sample, 536 S. Clark street, Chicago.

Managing Editor—O. H. Sample, 536 S. Clark street, Chicago.

Business Manager—H. C. Whitaker, 536 S. Clark street, Chicago.

Publisher—Allied Arts Publishing Co., 536 S. Clark street, Chicago.

Owners—R. J. Haight, 536 S. Clark street, Chicago; H. C. Whitaker, 536 S. Clark street, Chicago; O. H. Sample, 536 S. Clark street, Chicago.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities—None.

H. C. WHITAKER,

Business Manager.

Sworn to and subscribed before me this 16th day of March, 1914

M. J. STANTON,

Notary Public.

[SEAL]

(My commission expires Dec. 6, 1914.)



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They are called the Lamberton Memorial houses having been given to the city by Mrs. Mary Starbuck as an appreciation of her brother, Alexander B. Lamberton, who is president of the Board of Park Commissioners. In the vestibule gable there is a beautiful bronze medallion of Mr. Lamberton with a suitable description.

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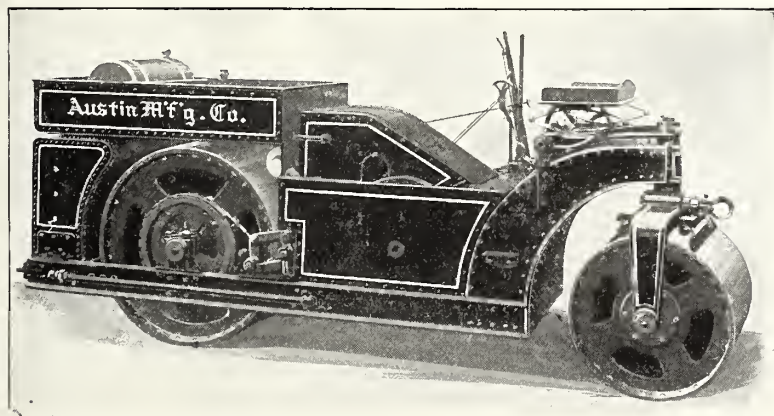
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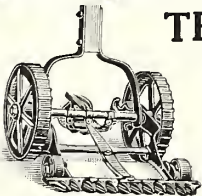
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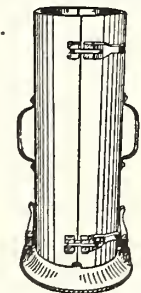


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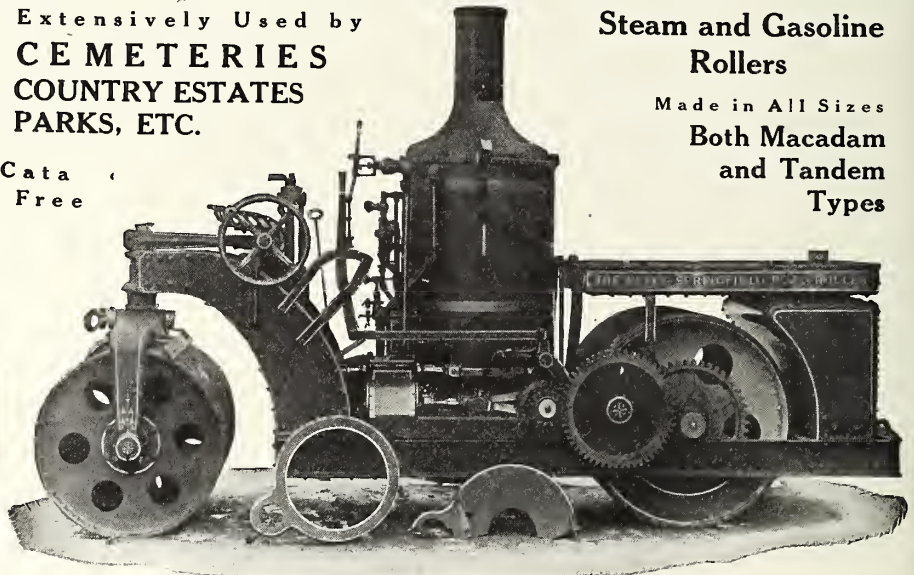
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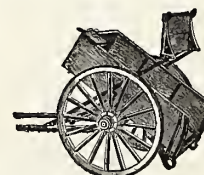
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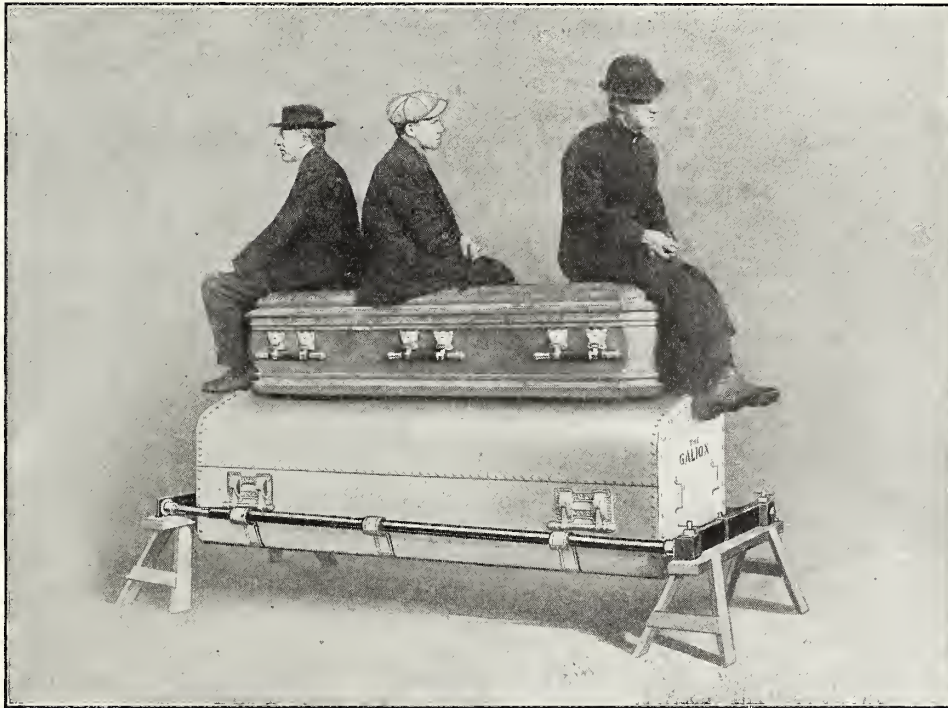
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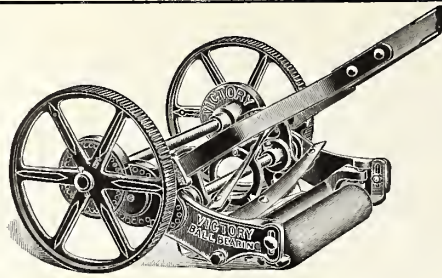
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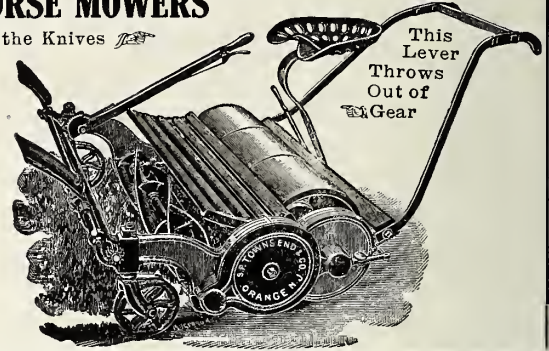
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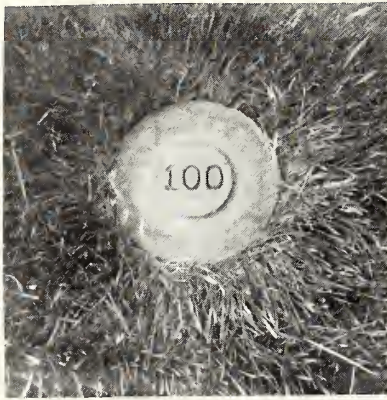
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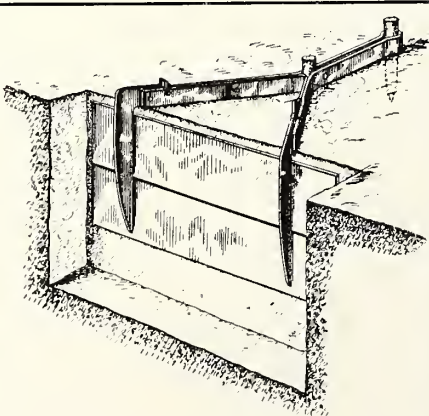
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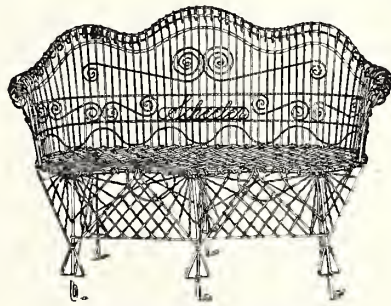
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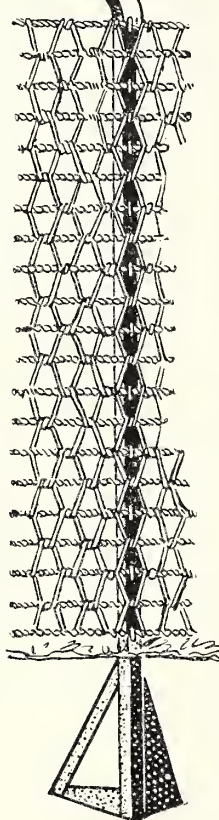
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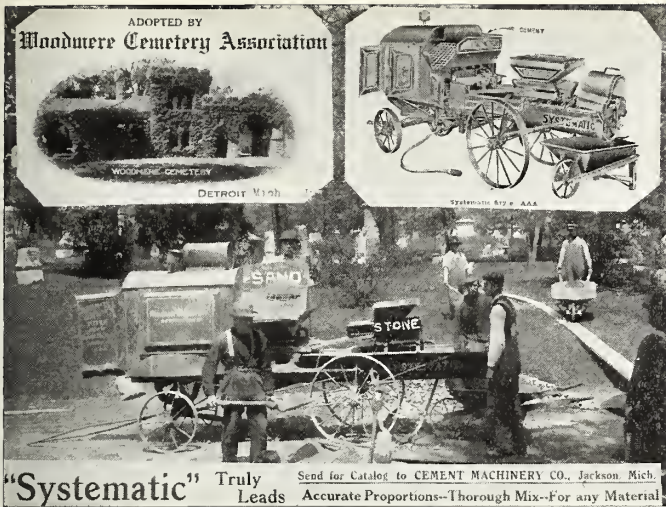
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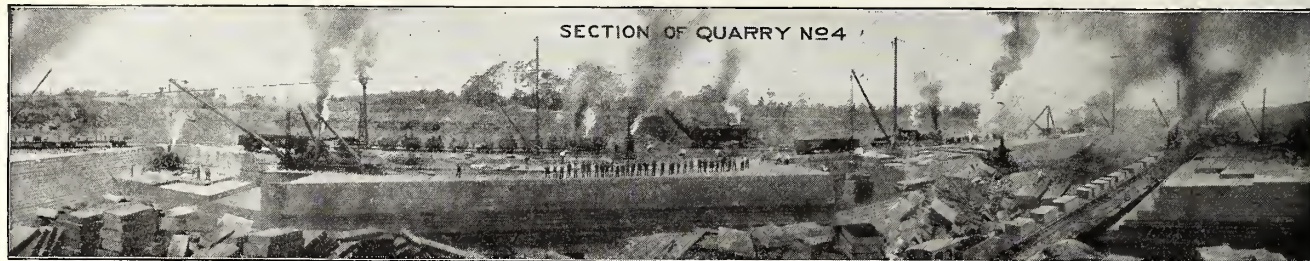
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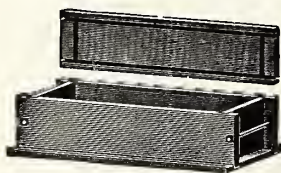
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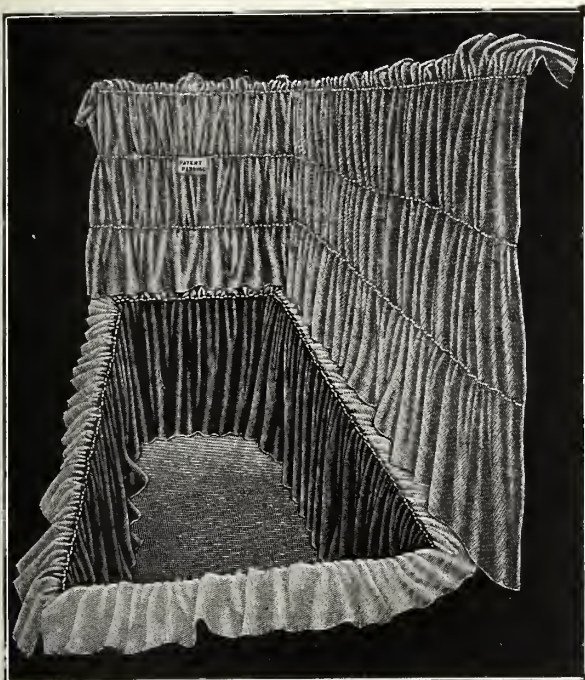
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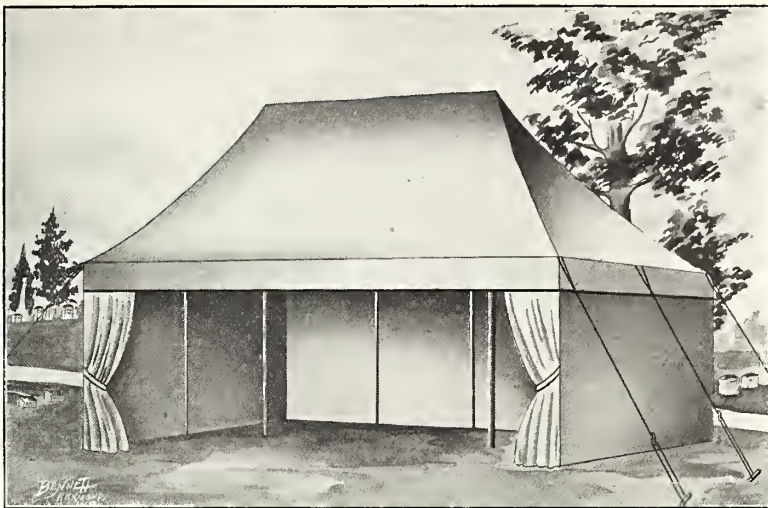
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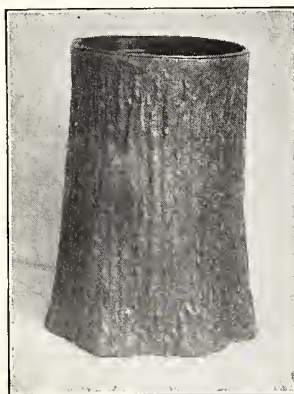


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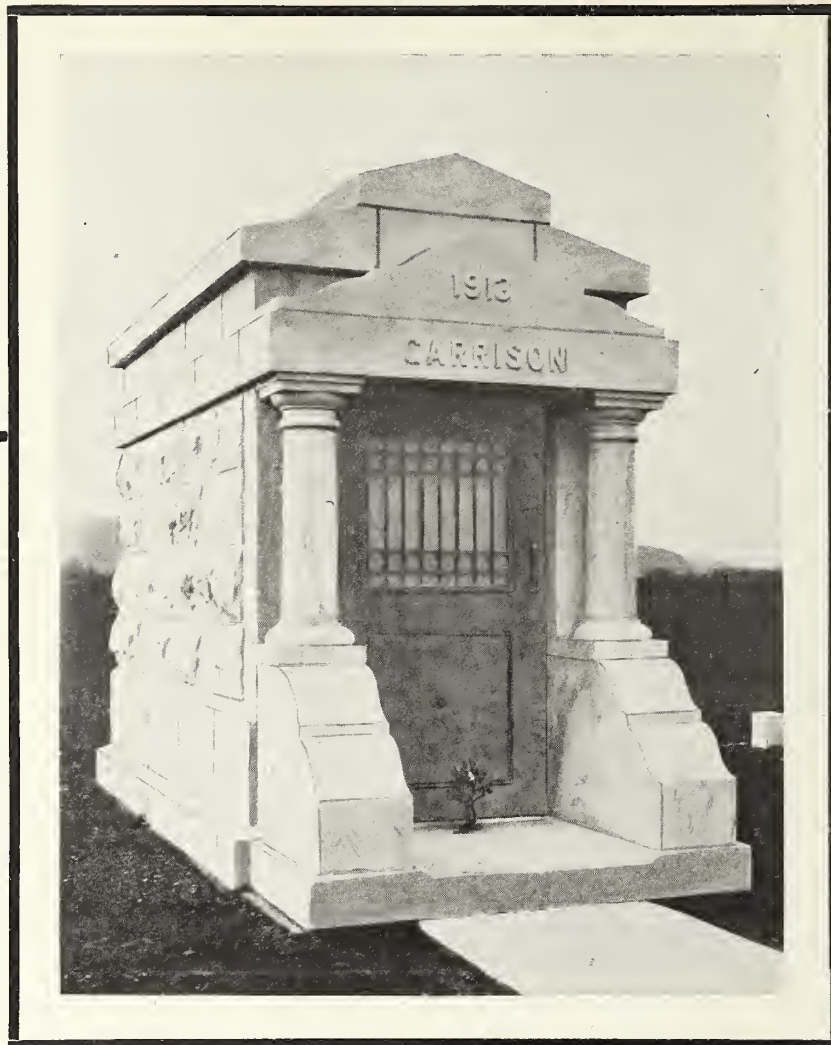
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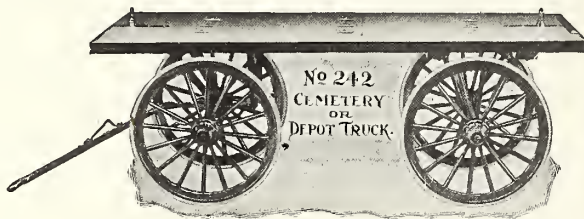
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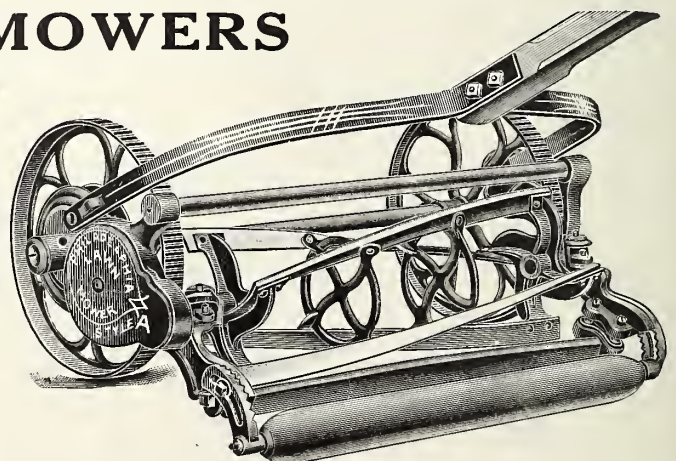
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Vol. XXIV., No. 4

JUNE, 1914

BUILDING AND CONSTRUCTION NUMBER

Model Cemetery and Monumental Art Exhibits—An Unusual Park Construction
Problem—Ornamental Type of Park Lamp Standard—Modern Cemetery Admin-
istration Buildings—Planning Addition to An Old Cemetery.



Width of Gates, 18 ft.
Height, 22 ft. at sides.

ROSELAND PARK CEMETERY ENTRANCE GATES
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Built and erected by The Stewart Iron Works Co.
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Piers, 6 ft. sq.
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Save 50 Cents Per Cubic Yard Over Hand Work On Your Concrete Construction

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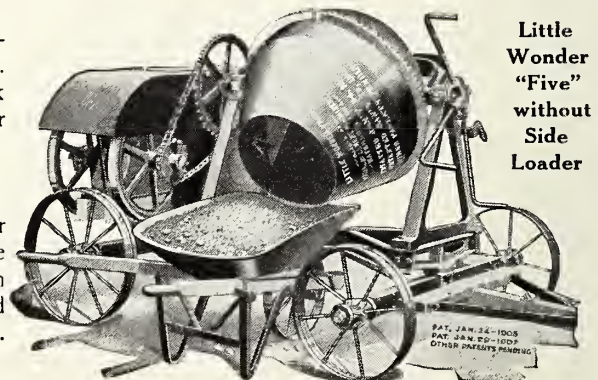
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We would like you to send it back as soon as possible, as we can not spare it for any length of time.

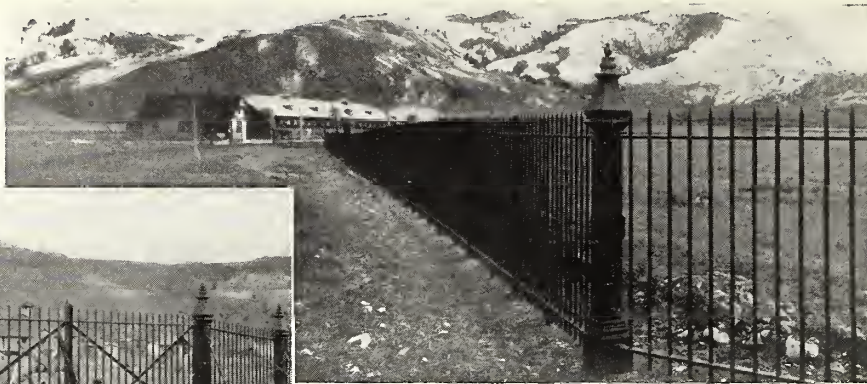
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JUNE, 1914

EDITORIAL

VOL. XXIV No. 4

Model Cemetery Expositions

An inspiring lesson is told on another page of what can be done for cemetery art and that of the small cemetery monument by the co-operation of all the organizations and industries that have to do with cemetery art as practiced in the model cemetery expositions in Germany. There is evidence in the pictures shown that artistic, well-proportioned forms for small cemetery monuments can be produced at prices no higher than at present paid by the average lot holder, if real art be applied to the designing of them. There is also evidence of the kind of co-operative effort that might be utilized in the development of such an exhibit in this country. Leading organizations in every art and industry pertaining to the development and adornment of the cemetery and public officials whose work is in any way related to cemetery or memorial art co-operate in the laying out of model cemeteries and in the placing of artistic monuments executed in the final material in fitting relation to their landscape surroundings. Nearly every great national exhibition of horticultural and gardening art has a cemetery section, and the expositions of architecture and the building trades give prominence to specimens of monumental art executed in practically all of the materials commonly used in that country. The Germans have led the world in the application of real art to small cemetery memorials, and it ought to be possible to produce expositions of this character in this country if the right individuals and organiza-

tions will take hold of the work. If the city building inspector, the cemetery director, the building trades organizations, the association of German granite workers, and the association for home protection, combine their efforts to produce a model cemetery exhibit in Germany, why is there not enough artistic talent and executive effort to produce a similar exhibit in this country somewhere in the ranks of any or all of such organizations as the National Sculpture Society, American Institute of Architects, National Retail Monument Dealers' Association, National Association of the Granite Industries, Association of American Cemetery Superintendents, American Civic Association, Architectural League of New York, American Society of Landscape Architects, American Federation of Arts, and others. We have annually in Madison Square Garden in New York and the Coliseum in Chicago, our automobile shows, our business shows, household shows, cement shows, flower shows, forest products expositions, and we have even had in Chicago two very successful outdoor sculpture shows. The public attends these shows in large numbers, patronizes them, and forms its ideas from them. Why not a model cemetery exposition for the public, that shall show what modern cemetery art and modern monumental art should be? PARK AND CEMETERY believes that expositions of this character can be held in this country, and that the not very distant future will see some substantial artistic advance in interest in model cemetery exhibitions.

Innovations In Park Methods

In the association department in our last month's issue were presented two interesting communications from Seattle which present ideas that are calculated to set park men to thinking. Mr. Cotterill's plan of advertising the parks by stereopticon lectures before commercial and civic organizations is one that could be pursued to good advantage in any community. When the people are thoroughly acquainted with their parks they are invariably interested in anything that pertains to park betterment and extension. The handsomely illustrated annual reports published by many park systems also serve the excellent purpose of advertising the parks to the people. Such methods will always win friends for park work, and the four million dollars of extension funds secured for the parks in Seattle show that live publicity methods result in more and better parks. The plan of

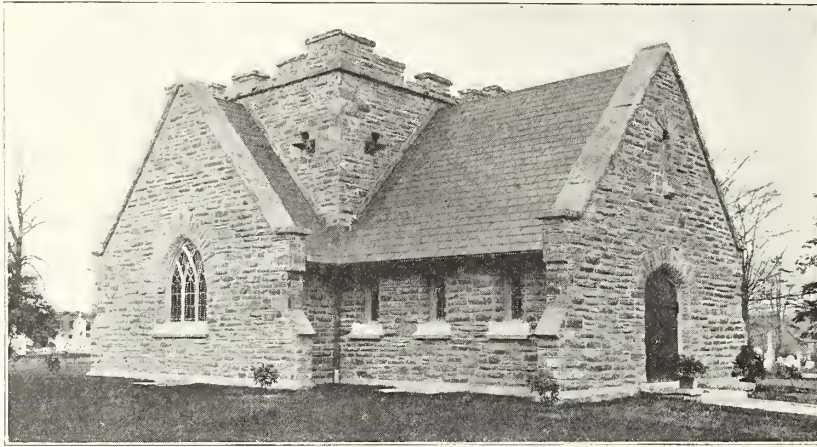
using city prisoners as laborers in extensive park improvements, as practiced in Seattle, is another innovation that will, however, not meet with the approval of park men everywhere. Superintendent Thompson, however, makes a good argument for the employment of the prisoners. For the preliminary work of clearing and grading large tracts in the outlying districts, where the prisoners are not brought into close contact with park visitors or the regular park labor, Seattle has found her experience very satisfactory, and there is possibly a suggestion here that could be utilized elsewhere under similar circumstances. It is, of course, not recommended that prisoners be used for regular park maintenance, but merely for extraordinary labor in opening new ground in unfrequented districts. Whatever we may think of these methods of work, they are at least worthy of consideration and study.

Summer Conveniences In The Cemetery

The summer season that brings large numbers of people to the cemetery calls to mind the need for outdoor comforts for the cemetery patrons. Rest houses, waiting rooms, comfort stations and plant watering accommodations are necessary in every well-conducted cemetery, and the best managed cemeteries have recently begun to do even more for the comfort of their patrons by providing bubble fountains, where visiting lot holders may quench their thirst. The lot owner comes regularly to the cemetery, and comes as a patron, not merely as a visitor. Looking after the family lot often is delegated to the women of the household, and they are especially appreciative of the convenience of a neat

bubble fountain that relieves them of the necessity of drinking from the watering cans or from the rude faucets provided for watering lawn and plants. Openings for the water supply must be placed at frequent intervals throughout the grounds, and it would not involve much additional expense to combine bubble drinking fountains with some of these. The need for this simple summer comfort is strikingly in evidence in the vicinity of any large city cemetery by the patronage of the neighboring saloon or refreshment stand. Needless to say, the cemetery would like to discourage the establishment of these places, and one of the surest ways is to provide more comforts within its own grounds.

MODERN CEMETERY ADMINISTRATION BUILDINGS



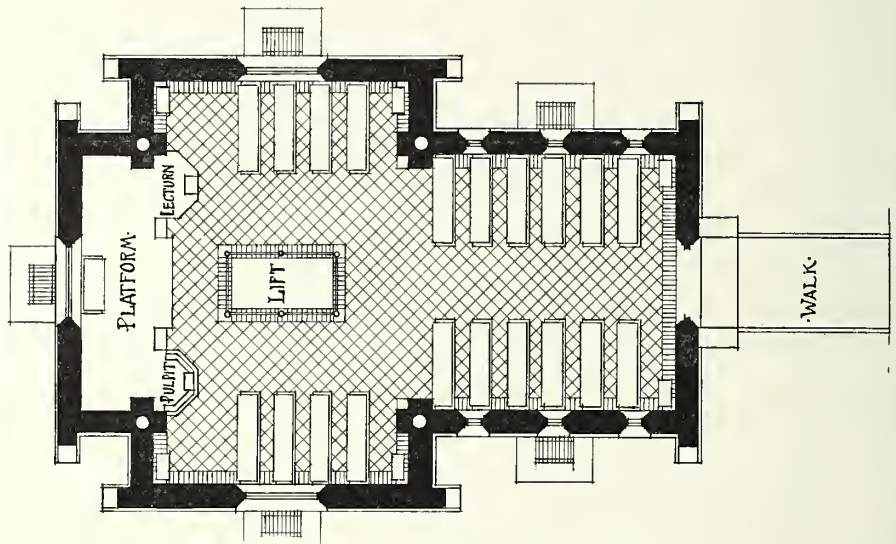
WILMINGTON AND BRANDYWINE CEMETERY CHAPEL, WILMINGTON, DELAWARE.

Two very different, but interesting types of architecture and construction in the chapel, the superintendent's residence and the office, the three chief buildings of administration in the cemetery, are offered for study in the new buildings illustrated here that have been recently completed in River View Cemetery, Portland, Ore., and in Wilmington and Brandywine Cemetery, Wilmington, Del.

One of them illustrates a very effective use of native stone for both interior and exterior finish and the other shows a very simple but effective and decorative use of brick construction.

The chapel of the Wilmington and Brandywine Cemetery, Wilmington, Del., is built entirely of Foxcroft stone, both inside and outside; the inside of the wall being faced with the stone and pointed similar to the outside. The window sills are of Indiana limestone. The main floor of the chapel is of concrete, with a finished cement top laid off like tile.

Over the nave of the chapel there are



FLOOR PLAN, WILMINGTON AND BRANDYWINE CHAPEL.

two roof trusses, which support the horizontal roof rafters. These trusses, roof rafters and the entire ceiling of the chapel

are of Georgia hard pine, finished in the natural wood, slightly darkened and the same wood is used for window and door frames and for the main entrance doors, which are hung with ornamental wrought strap hinges.

The pews, pulpit and reading desk are of dark quartered white oak.

The lift, shown in the center of the main floor, has the platform level with the main floor, so that anyone wishing to have the remains interred in the temporary receiving vaults built in the basement may have the casket wheeled directly onto the lift and at the proper time in the services slowly lowered, as in a grave, to the basement, where it can be wheeled off and deposited in one of the vaults. There are twelve of these receiving vaults.



INTERIOR OF WILMINGTON AND BRANDYWINE CHAPEL.

The stair to the basement is concealed by the front part of the platform, which hinges up.

The Foxcroft stone, of which the building is built, is a beautiful stone coming in thin horizontal layers suitable for this class of work and with a variety of shade and color in browns and grays. The stone is not dressed, but is left in the rock finish and only dressed with the hammer enough to obtain splays for window jambs, outlines for buttresses and bevel for water table.

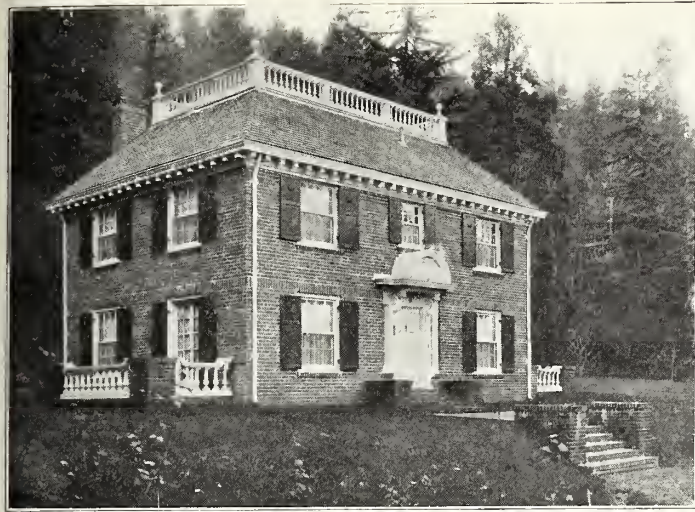
The building is roofed with dark red slate.

The building is heated by six gas radiators in the corners and gas lights are provided for pulpit and reading desk.

The building is arranged to seat one hundred people, but fifty more can be accommodated by the use of movable chairs.

The building is cruciform in plan, as the plan shows, having the central tower supported on four stone Gothic arches, as will be seen from the interior view.

The construction of the building is such



SUPERINTENDENT'S RESIDENCE, RIVERVIEW CEMETERY, PORTLAND, OREGON.



OFFICE BUILDING, RIVERVIEW CEMETERY, PORTLAND, OREGON.

that will require very little attention in the repairs for many years; the floor is out of concrete on iron girders and the building is heated and lighted with gas; in the basement there are now twelve crypts for the temporary use at any time for burials, and also additional room to place forty crypts.

This building was designed by Architect James E. Dallett, of Wilmington. The cemetery officers are very much pleased with this building, which was much needed, and believe that there are none of a similar character in any cemetery in the country than can surpass it for beauty and durability. It cost approximately, complete, \$10,000.

Samuel C. Penrose is superintendent of Wilmington and Brandywine Cemetery.

The new superintendent's residence and office recently erected in River View Cemetery, Portland, Ore., illustrate a fine type of brick architecture, and are impressively placed among the Oregon fir trees, near the front entrance to the grounds. A new entrance and gateway is being built this season, and which will effect a complete transformation in the appearance of the entrance. Ellis F. Lawrence, of Portland,

is the architect of the buildings and also for the new gates.

These improvements have been made under the direction of Superintendent Theo. E. Anderson, who came to this cemetery from Danville, Ill., about two years ago.

The superintendent's residence contains eight rooms with bath, and an extra lavatory to serve the downstairs. From the entrance a large hall, eight feet wide, runs to the rear and opens into a cozy den. The stairway serving the second story leads from this hall.

The exterior is of red brick and is of old English architecture.

The interior is finished in Oregon Fir throughout, and white enamel finish.

The house is 35x28 feet, with an extension in rear for kitchen and rear entrance 10x25 feet. It is a Dutch kitchen, with all built-in conveniences. It has hot air furnace heat, electric light, city water. The living room is 14x24 feet on south exposure. The building fronts east, overlooking the Willamett river, with Mount Hood in the distance.

French glass doors open from hall to living room and dining room, and also

out onto the brick terraces on both north and south sides of the house. The living room has a large fireplace with built-in book cases on each side and mantel enameled white. The fireplace is of red brick, with red tile hearth. There are hardwood oak floors throughout the building. The stairs are oak with white enameled balustrade and mahogany handrail; all light fixtures are of old English design.

The house complete cost \$6,000. The office and rest room cost with the furniture about \$3,000, and is also of red brick and old English design and interior finish in Oregon fir, with gray stain finish. It contains a large rest room with oak floors, large fireplace and seating room for about 40 people, and ladies' room in connection.

The superintendent's main office and private office is on south end of building, and gentlemen's toilet in rear in connection with entrance from janitor's room; all furniture is new, of antique oak, and all desks and tables are covered with French plate glass. The office furniture consists of large oak roll-top desk, table, one typewriter desk, one built-in glass covered counter and built-in seats in vestibule and rest room.

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J. J. LEVISON, Brooklyn, N.Y., Sec.-Treas.

ASSOCIATION EMPLOYMENT BUREAU.

WANTED—Position as cemetery superintendent by a competent and experienced landscape gardener, of good address, practical and energetic, with a knowledge of platting, road work, handling of men, keeping of records and all work pertaining to a cemetery; 10 years in last position. Address "C. A. W.," Employment Bureau, Am. Assn. of Park Supts., care J. J.

Levison, Forester, Park Department, Brooklyn, N. Y.

A member who was superintendent of parks in a metropolitan northern city wishes to change position on account of political interference with his work. Trained in horticulture, planning and development of parks; has done important work of park development, and is thoroughly familiar with park work of every character; can furnish

highest references as to ability to take charge of large city park system. Address "Politics," care Secretary Levison.

OBITUARY.

After a brief illness, Mrs. William S. Manning died on May 2 and was buried at Wildwood Cemetery, Winchester, Mass. The deepest regrets and sympathies of the Association are extended to Mr. Manning by fellow members of the Association and a wide circle of friends.

RECENT WORK IN ASSOCIATION PARKS.

(Continued.)

In regard to the work done by the Department of Parks, Borough of the Bronx, for the past year or two, our construction work during the year 1913 has been very limited, owing to the fact that we have received almost no appropriations for construction work during the past year, but I shall be pleased to give you a summary of what work has been done with the meager amount of funds available.

In Bronx Park, a new shelter house was completed, and a stone wall surmounted by an iron fence was erected, also wing walls to the abutment at Bedford Park entrance, and a flight of granite steps. In the Zoological Park a new power plant and workshop building was erected, and an addition placed on the Rocking Stone Restaurant. We have now in course of construction there a fine building to be used as a public service and office building, which will probably be completed very shortly; also a new shelter pavilion is in course of construction in the Zoological Park.

A new garden has been completed in Bronx Park, known as the Sunken Garden, which adds greatly to the attraction of the park. This covers two acres of ground, which was a low marsh land, used in years past for the dumping of refuse of all kinds. Sixteen thousand cubic yards of clean fill and 4,600 cubic yards of top soil brought this area up to a proper level. Ten bushels of grass and seed have been sown, flower beds have been laid, and 27,000 plants of various species have been planted. The high banks surrounding the garden have been covered with rhododendrons and azaleas, and some 400 feet of walks have been laid.

In Pelham Bay Park a most necessary improvement was completed during the year, namely, the trenching and draining of the salt meadow lands in this park. The mosquito nuisance has been very materially decreased, adding thereby much to the enjoyment of the large number of visitors to this section.

At Orchard Beach, in this park, nearly 300 tents covered some 1,200 health-seekers during the summer. Water service is now supplied to the camp at both the front and rear. These camp sites are reserved for the use of families, preference, if any, being given to families with small children. Camp sites for men have been reserved in another part of the beach. Last summer the Working Girls' Association maintained two large tents for the use of working girls over week-ends, and they were well patronized, discipline and order being noticeable all through the season.

At the parade grounds, the six new baseball fields opened up during the year were of material assistance in caring for the many baseball enthusiasts.

Eighteen new greens were provided for the golf links in this park, and the links

were used much more extensively than heretofore, it having been found necessary to put into use the register system in operation in Van Cortlandt Park on Saturdays, Sundays and holidays, in order to regulate the playing.

In Van Cortlandt Park, the great athletic center of all the boroughs of Greater New York, a cross-country course has been laid out, on which, during the season, a number of important events, including the college national championship, have been run. During the summer, 28 baseball diamonds were occupied from early Saturday morning to late Sunday night, and by no means neglected during the other days of the week. A number of cricket grounds have been provided by the department, and used by those who play this game. During the season polo games were played on the parade grounds, where also various bodies of the National Guard carried on their drills and manoeuvres. The golf links in this park were so largely patronized as to be congested on Saturdays and Sundays, suggesting the desirability of opening up another course as soon as the city's finances will permit.

During the fall and winter the baseball fields were used for football, and the lake offered skating facilities to thousands during the winter. In the Colonial Garden, 120,000 plants of various kinds were planted during the season. In the nursery, some 18,000 evergreen and deciduous trees have been propagated, and seed has been sown providing for some 20,000 trees and shrubs, and some 200,000 herbaceous plants. For the different parks in the system, 1,034 trees and 15,000 evergreen seedlings have been supplied.

During the year the Mason & Hanger Company, which has been excavating for the new aqueduct, has filled up some 10 acres of swamp lands in this park, and the work of reclaiming the swamp lands between the railroad tracks and Broadway will probably be begun shortly, as we have received an appropriation of \$25,000 for this purpose. To complete this work, it would require \$100,000, but the \$25,000 available will enable us to at least start the improvement.

To commemorate the original commission appointed in 1883, for the purpose of selecting grounds for the parks in The Bronx, the Bronx Society of Arts and Sciences presented to the city six bronze tablets, which were placed in the different parks, and were unveiled, with appropriate ceremonies, on April 19, 1913.

During the year the Poe cottage, the home of the poet, Edgar Allen Poe, was purchased by the city, and removed to Poe Park. It has been entirely renovated, and was formally opened to the public, as a sort of museum containing relics and objects of interest in connection with the life of the poet, on November 15, 1913.

It may, perhaps, be of interest to your readers to note the following statistics showing the vast number of people from all of the boroughs of Greater New York, accommodated with recreation facilities in the parks of this borough during the summer:

PERMITS ISSUED DURING 1913.

Tennis, 5,850.

Baseball, 671. (Each used on an average ten times, 18 players being engaged each time, making an average of 120,780 players accommodated.)

May parties, June walks and outings of all kinds, 353. (Averaging 82 persons to each permit, a total of 28,946 persons.)

Football, 69; camping, 285; cricket, 31; miscellaneous, 103. Total, 7,362.

Total number of persons using permits during the summer season, 178,556.

The above, of course, is only a statement of the number of persons using permits for recreations. The fact that the natural beauties of our parks are fully appreciated by the people of Greater New York, is evidenced by the vast number who visit them during the summer season, especially on Sundays and holidays, when at least 150,000 persons visit them in one day, a great majority of whom are from boroughs outside of The Bronx.

The actual area of park lands in The Bronx is 4,141 acres, as against 3,054 acres for all the other boroughs combined.

MARTIN SCHENCK,

Chief Engineer, Park Dept.

Borough of The Bronx, New York.

* * *

In reply to your letter re progress of Park Departments, during the last year or two, may say that we have been making fair headway along lines which are probably not new, but simply the provision and development of parks, for a new and rapidly growing prairie city of 200,000 inhabitants, along lines which are necessarily conservative by reason of financial considerations.

The physical and climatic conditions existing here make the cost of paving, sewerage, etc., very heavy, and the annual outlay on these matters is so large as to make it very difficult to obtain money for capital expenditure on parks.

Our revenue for maintenance is fixed at one-half mill on the total assessment of the city, and as it is expanding annually, is ample for the purpose.

We have recently improved a number of neighborhood parks, ranging in size from two to seven acres, and these improvements are very comprehensive, as the foundation for these small parks is simply bare prairie, with an underlying gumbo soil of the most tenacious and unkindly nature of any soil in the world.

We are working out the plans on two large suburban parks, and have already provided them with facilities for recreation, music, refreshments, etc. We built

last season the finest open air swimming pool in Canada, and made good progress towards the completion of a twenty-acre athletic field, with its track, bowling greens, tennis courts, outdoor gymnasiums, and children's playgrounds.

Wherever space permits, tennis and other games are provided for in all the parks, and corners are set aside for playgrounds for the smaller children.

Up-to-date electric lighting is being installed as funds permit, drinking fountains and toilet facilities are provided wherever necessary, abundance of good music is given, and the problem of attracting people to the parks which seems to affect so many cities, is replaced here by the problem of providing space for all who crowd to take advantage of the various phases of out of door rest and recreation.

Many thousands of trees and shrubs have been planted recently, all supplied by the park's nursery, the establishment and stocking of which was a very decided betterment, from both an economical and utilitarian point of view.

The parkway spaces on all the streets of the city are controlled by the Parks Department. The lawn construction, tree planting and maintenance is all carried out by this department, and the cost assessed to the property owners on a frontage basis. There are approximately 130 miles of these parking strips, of an average width of fifteen feet, and planted with over 30,000 trees, more than 5,000 of which were planted last year.

Inkster Parkway is the commencement of a drive planned to encircle the city with a total length of twenty-four miles. Four and three-quarter miles have been partly improved and planted. An additional four miles has been recently donated for its continuance. The parkway is 120 feet wide with double driveway, and four rows of trees, with occasional shrubbery plantings.

The Municipal Cemetery of 160 acres is controlled by this department, and has been placed on a self-sustaining basis, by careful management. Many improvements have been carried out in the grounds recently, including very extensive planting of trees and shrubs.

The policy of the Parks Board is to provide neighborhood parks, within five minute's walk of all residential districts, large suburban parks for sports and picnic crowds, to beautify all city streets, to allow no concessions, to do all work, if feasible, by park department workmen, and to make all its provisions for rest, amusement and recreation without charge of any kind.

We have many progressive schemes in mind, and with true Western optimism, feel sure that if we keep our ideals high, and work hard, we will accomplish them in due time.

G. CHAMPION,

Superintendent Public Parks Board.
Winnipeg, Canada.

Regarding the progress made, new attainments accomplished, and new ideas for future development of the parks of this city, I wish to state:

First—That at the present time our park system is in good condition, the same having been maintained up to the highest standard during the past year—1913.

Second—In reference to the progress made in our city parks within the past year in the way of making them more popular and attractive to the general public, I will say that eight new, modern and up-to-date shelter houses, including comfort stations, besides three new merry-go-rounds and one new golf shelter house, have been erected in our large parks and golf grounds. These new buildings were erected at a total cost of \$113,836.12, and are considered a vast improvement along these lines.

Third—In reference to future ideas, or new accomplishments in our parks, will state that we are now contemplating the construction of a large number of tennis courts; also new ball grounds, and the reconstruction of our lakes, so they can be used for swimming purposes.

Fourth—In addition to these improvements, sufficient money has been set aside

for the erection of a large and beautiful monument, in honor of Mary E. Schenley (donor of the park which now bears her name), which will be located at the front entrance of Schenley Park, and will cost \$50,000.

GEO. M. BURKE,

Superintendent, Bureau of Parks.
Pittsburgh, Pa.

The principal work of the Park Department of Cedar Rapids, during the past two years, has been to provide more pleasure for the people than they had hitherto had. Playground apparatus has been provided in all the parks. One new playground has been developed and equipped. A bathing beach has been established and bathhouses with steel lockers have been erected. Wading ponds and tennis courts have been provided in the principal parks. Vacant lots have been secured from property owners for neighborhood baseball games. Buildings for picnic and refreshment privileges have been erected in three of the principal parks.

In addition to this, the usual amount of landscape work and new road building has been carried on.

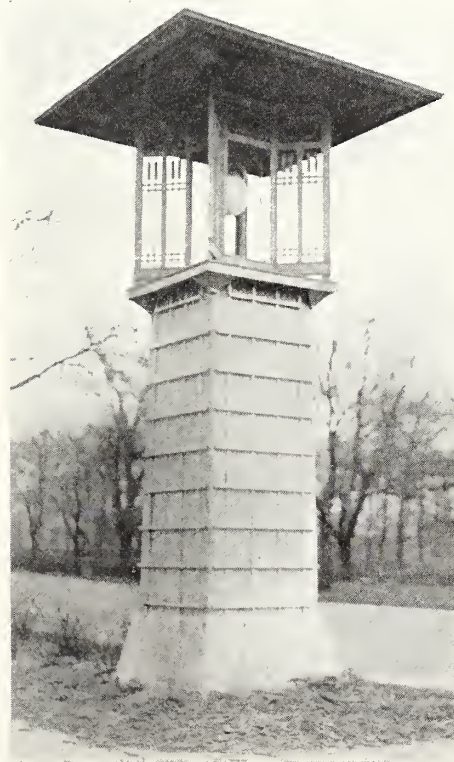
FRED J. LAZELL,

Dept. Parks and Public Property.
Cedar Rapids, Iowa.

DECORATIVE FORM OF PARK LAMP STANDARD.

There is in use in the West Park System of Chicago a very decorative type of concrete lamp standard that shows strikingly

how the ordinarily commonplace lamp post or pole may be transformed into a real adornment to the landscape.



CONCRETE LAMP STANDARD IN CHICAGO WEST PARK SYSTEM.

The bases and shafts of these lamp standards are of monolithic concrete of a coarse stone-like texture. The vertical supports and in fact all of the top parts except the roof are of cast iron painted in imitation of verde antique bronze and the roofs with the paneled ceilings or soffits are of copper.

The ornamental uprights of the tops, it will be noted, radiate from the center so that they present only a very thin edge, which can cast a shadow, and the use of the lights has shown that in fact these uprights cast no shadow, as the diameter of the globe of the arc lamp used is so much greater than the thickness of the cast iron upright.

The intention was that a vine would crawl on the rough surface of the concrete and the wooden trellis, which is shown in the photograph, has been added for the vines without materially damaging the artistic effect of the standard.

The additional beauty of this post when covered with vines may readily be imagined.

The design for this interesting park utility was made by architects Richard E. Schmidt, Garden & Martin, and the metal work was executed by the Winslow Brothers Co.

MODEL CEMETERY and MONUMENTAL ART EXHIBITS

The most intelligent and systematic efforts toward elevating the standards of art in cemetery monuments in modern times are to be found in the model cemetery exhibits that are held periodically in Germany.

Leading organizations in every art and industry pertaining to the development and adornment of the cemetery and public of-

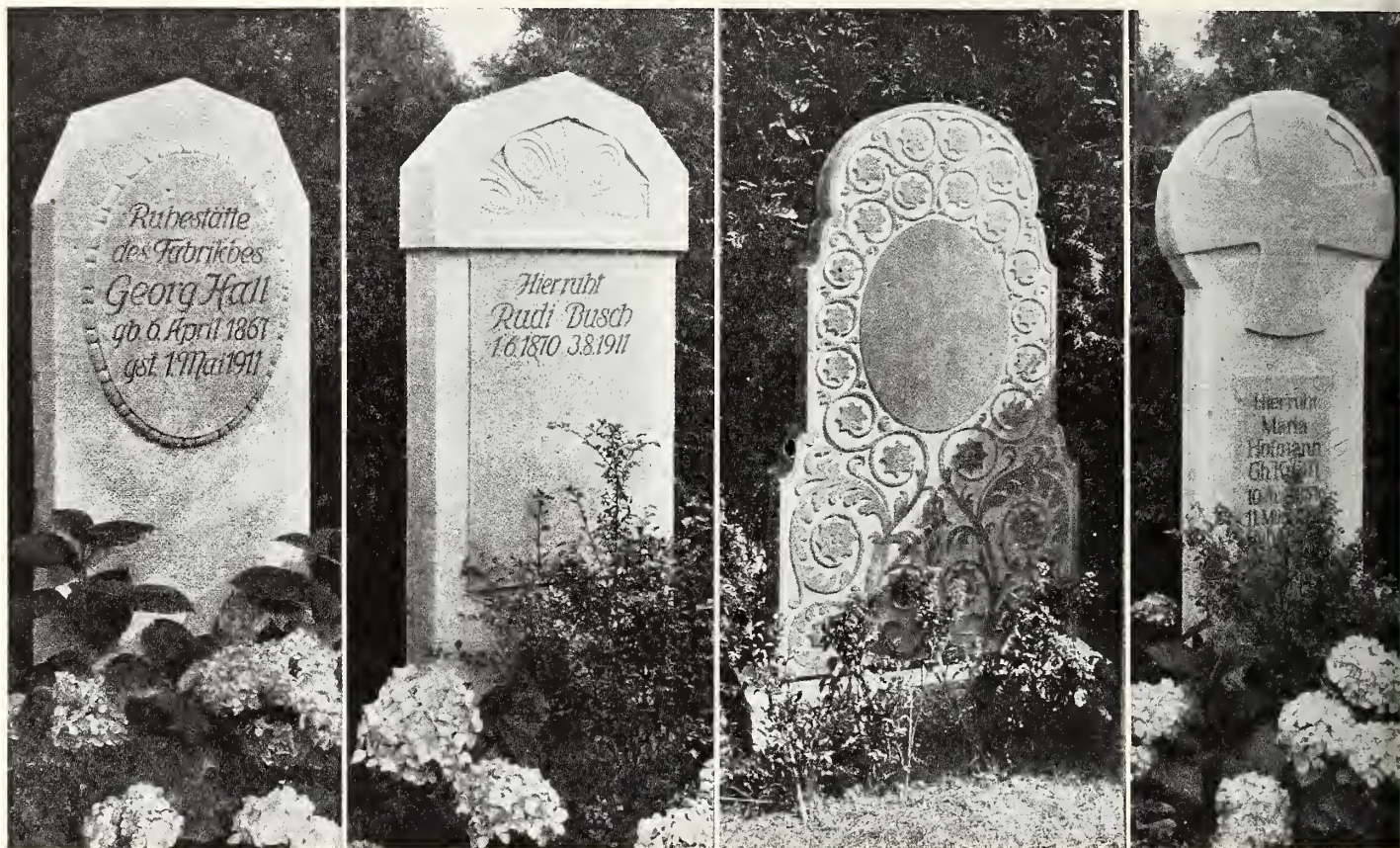
these two latest expositions of the memorial arts.

In speaking of the cemetery part of the recent Breslau centennial horticultural exhibition, a leading landscape architect and horticultural authority writes in one of the foremost horticultural journals of Germany:

"The central feature of the entire Bres-

one another that really impressive effects were created.

From the adjoining highway the visitor passed into the entrance hall to a platform from which the view showed a grass plot bordered with hedges and bordered on two sides with rows of formal pyramids of box. Opposite the entrance stood the main building which forms the dominating fea-



ARTISTIC DESIGNS FOR SMALL MARBLE TABLETS, SHOWN AT Breslau MODEL CEMETERY EXHIBIT. EXECUTED BY W. THUST, GNADENFREL, GERMANY, IN GROSS-KUNZENDORF MARBLE.

ficials whose work is in any way related to cemetery or memorial art co-operate in the laying out of model cemeteries and in the placing of artistic monuments, executed in the final material, in fitting relation to their landscape surroundings.

Nearly every great national exhibition of horticultural and gardening art has a cemetery section, and the expositions of architecture and the building trades give prominence to specimens of monumental art executed in practically all of the materials commonly used in that country.

Two recent exhibitions of cemetery art held respectively in Breslau and Leipzig are especially instructive, not only in what they actually showed, but in the manner in which the various interests co-operated for the success of the exhibits.

The cemetery officials, the City Building Inspector, the Superintendent of Buildings, the Association for Home Protection, the Building Trades organizations, the Association of German Granite Workers, all took leading parts in the production of

lau horticultural exhibition was undoubtedly the cemetery section. Of all attempts so far known to me to further the ideas of the general public regarding questions of artistic cemetery arrangement, this Breslau exhibit occupies first place. Horticultural Director Erbe, the energetic president of the municipal cemetery, who is responsible for the direction and horticultural appearance of this model cemetery, which with its magnitude of almost $2\frac{1}{2}$ acres meets the burial requirements of a city of 10,000 inhabitants; City Building Inspector Behrend, who designed the plan and buildings, and Government Superintendent of Buildings A. Gellhorn, who, in connection with the Schlesischer Verein für Heimatschutz (Silesian Association for Home Protection) planned the historical section, have by intelligent co-operation accomplished a result that brought forth unanimous approval."

The grounds were laid out with skillful utilization of existing conditions, and their different sections merged so naturally into

ture of this part and the central point of the entire arrangement. It was in every way an impressive landscape picture.

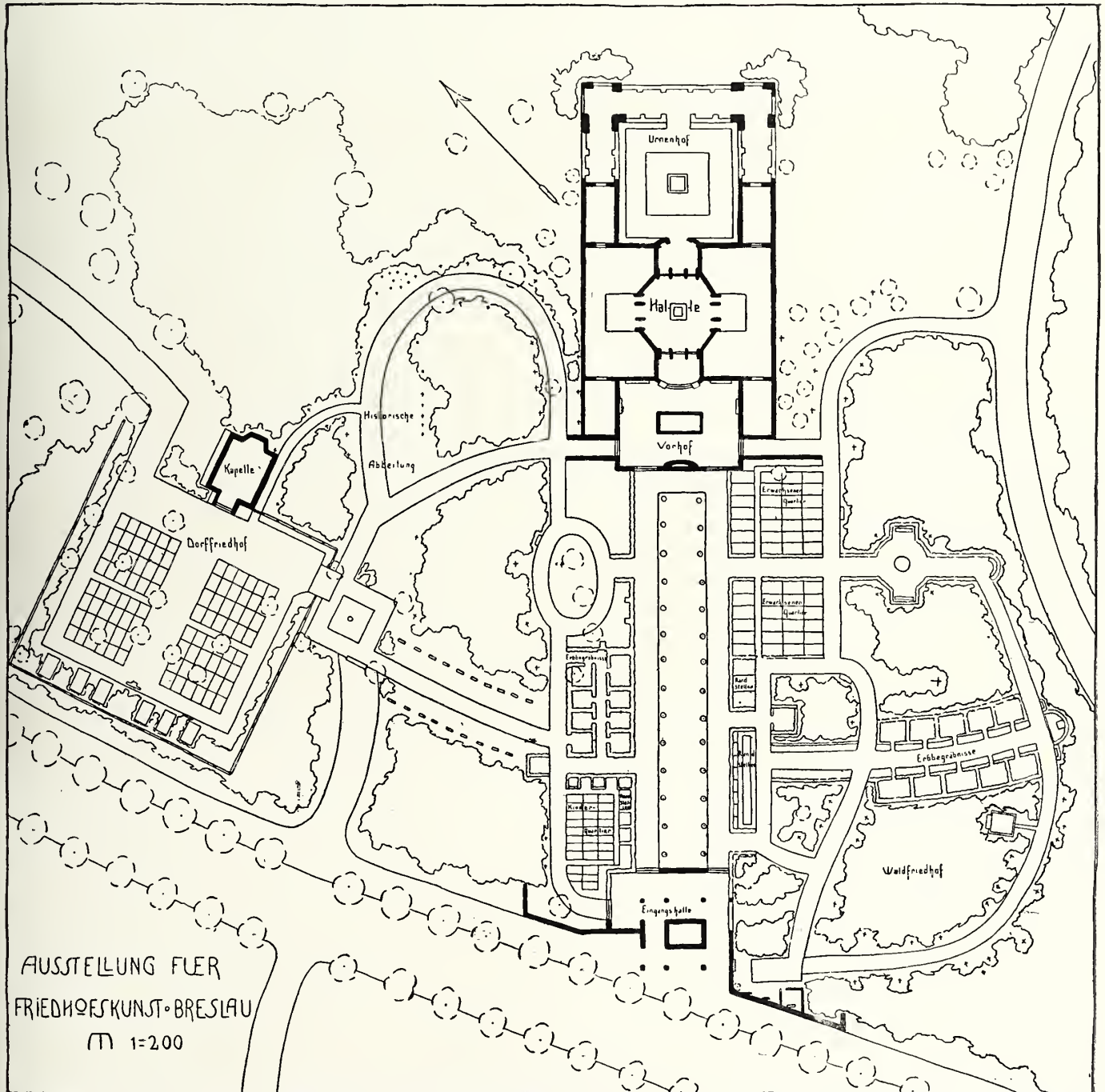
The main building, in front of which was a small court with a pool of water, contained a hall in which sixteen bronze urns with a ceramic wall backing were set up. Three adjoining apartments contained plans, drawings and photographs, illustrating many aspects of cemetery art in Silesia. This exhibit was completed historically by the construction out of doors of a complete old village burying ground and of a historical section. The latter sections were especially interesting. They were located under shady groups of trees on the western edge of the cemetery. A large number of finished memorials, selected with fine discrimination, from the simplest metal cross to the richest ornamented stone sarcophagus, showed what was accomplished in the past in Silesia in this field. These could be seen by the side of examples of the blacksmith's art, and a number of cast-iron grave monuments dating from the time

when the iron founder began to imitate styles of stone architecture. These old memorials were judiciously placed in the edges of the clumps of woods and in some instances were so overgrown with vegetation that visitors might fancy themselves translated to some peaceful, unused old graveyard.

ern progress. This was acquired through generous and private official assistance and removed to this exposition for its permanent preservation as an historical memorial. In connection with the wooden enclosure and a wooden entrance gate of characteristic form it lent true historic character to this ancient rural burial ground. In some

made the picture particularly attractive. In other rooms reached from this urn-court, plans, photographs, models, etc., of actual modern cemeteries, parts of cemeteries and interment arrangements were shown, presenting an interesting view of what has been accomplished in modern cemetery art.

All this contributed to the perfection and



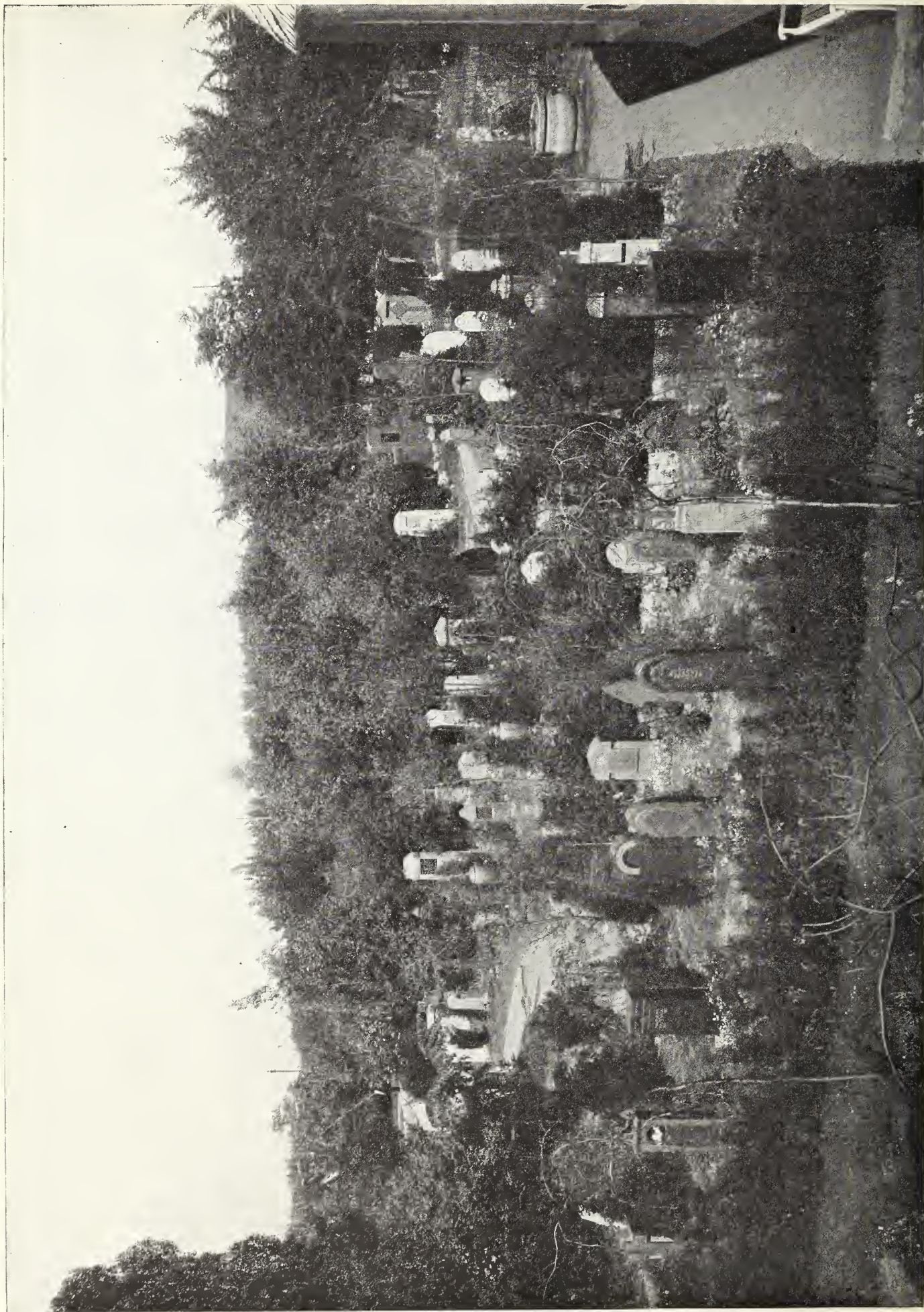
GROUND PLAN OF MODEL CEMETERY EXHIBIT AT BRESLAU.

The village burying ground referred to, laid out among the trees, included two regular groups of graves in rows, with characteristic styles of grave memorials sometimes encountered in the burying grounds of remote villages. Immediately within the entrance was a structure of typical Silesian character, an ancient wooden church, that was crowded out of its former location at Kandrizin by the march of mod-

ern progress. This country cemetery was reminiscent of the village church yards in England which are, however, quite differently planned.

Connected with the historical section in the main building of the cemetery was an open columnar hall enclosing a court for urn memorials ornamented with a running fountain. Charming views between the columns of the surrounding park landscape

completion of a complete cemetery exposition in connection with the modern cemetery section actually laid out. Here were shown small sections of single graves uniformly planned with the space rationally utilized and enclosed by hedges and model sections for more pretentious burial places. In these also the prevailing principle was observed, that with due freedom for the display of personal taste in individual



VIEW OF MONUMENTAL ART EXHIBIT OF GERMAN ASSOCIATION OF GRANITE WORKERS IN LEIPSIK MODEL CEMETERY EXPOSITION.



URN COURT FOR CREMATORY SECTION, BRESLAU MODEL CEMETERY EXHIBIT.



SINGLE GRAVES IN FOREST CEMETERY SECTION, BRESLAU MODEL CEMETERY EXHIBIT.

graves, each section must have its prevailing uniformity of character, which no obtrusive detail must disturb. All parts were made readily accessible and connected by paths, but, on the other hand, separated

by hedges. In the parts containing natural trees and woods, which were less closely occupied, large family burial plots and hereditary burying places had been laid out. Here a curved road with a uniform horticultural treatment on each side served to emphasize the general effect sought for in the treatment of this section.

In the memorial stones in this modern portion much care was taken in presenting variety in form and treatment of the material and many suggestions were presented. Sandstone, granite and Silesian marble monuments were displayed in different treatments to show their possibilities. Artificial stone, in good forms, was also permitted.

Like Breslau, which held in connection with its unique historical centennial exhibition an exposition of cemetery art, Leipzig has combined a similar exhibit with its excellent building trades exhibition. The monumental craftsman in Germany must feel pleased that the cities manifest such great interest as is shown by the persistent efforts to elevate the greatly neglected cemetery art. For the exhibitors themselves, the value of the distinction they get by showing to the public works of real art is evident.

It is both interesting and profitable to compare the two exhibitions of Breslau and Leipzig. Not only sculptors, monumental workers and architects, but also cemetery officials may derive great benefit from the comparison.

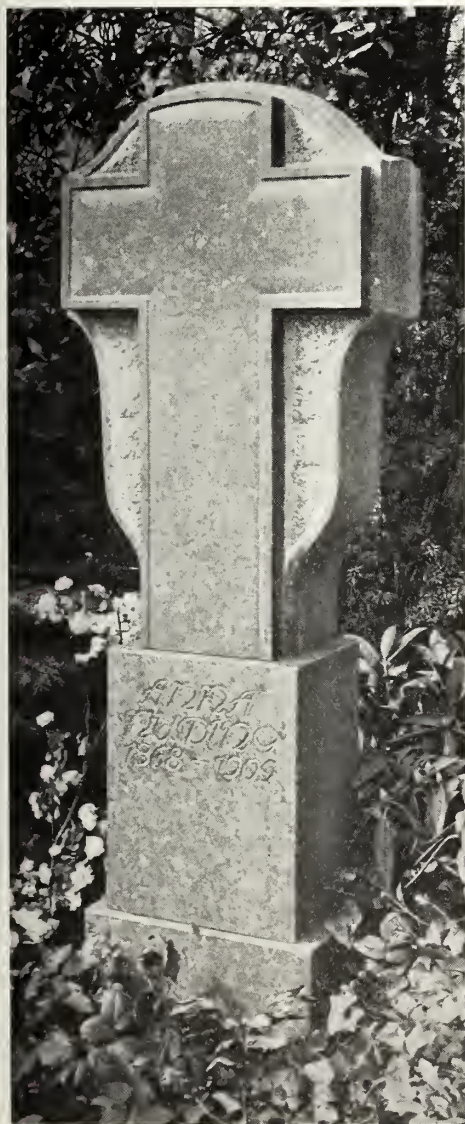
In Breslau it was the landscape gardening plans which were brought into prominence and made a very good impression on the observer. The monuments, especially in the single grave sections, received secondary consideration. Monuments of cement, gayly painted, of the most atrocious kind, were admitted, while the door was closed to polished granite!

It was otherwise in Leipzig. There the grave memorial held first place. The gardening decorations were treated as supplementary—as accessories.

On entering the cemetery art exhibition

the little village cemetery, adjoining the church, made a homelike impression with its simple, paved paths.

The "Forest Cemetery" section of the Breslau exhibit was justly criticised for the



CROSS TABLET IN MONUMENTAL ART EXHIBIT AT LEIPSIK.
Design by Prof. Dr. Billing, Karlsruhe.
Executed by Rupp & Moeller, Karlsruhe.



VASE MONUMENT IN MONUMENTAL ART EXHIBIT AT LEIPSIK.
Design by Architect W. Franke. Executed by Ewald Scharf.

predominance of the "shell-lime," soft stone and imitation stone monuments which the designers of this part fancied were more in keeping with "rustic" surroundings. They even in some instances gave these stones an imitation antique surface in a mistaken idea that polished or highly finished stones are not in harmony with the landscape. The latter delusion is cherished in a pronounced fashion in certain circles of artists in Germany and has even led to regulations in certain cemeteries limiting the use of polished granite.

The views of the Leipzig exposition and of some of the individual memorials exhibited that are shown here demonstrate more forcibly than words the admirable arrangement of this model cemetery and the artistic standards of design that prevailed in a wide variety of types of small monuments.

The "Sofie Benn" memorial, illustrated, is a graceful, simple type of tablet, distinguished by tasteful decoration in the inscription and carving about the top and an original form of base embodying two square flower receptacles hallowed out of the extensions of the base at either side. This is the work of E. C. Klucken, proprietor of the "Workshops for Cemetery Art," Rat-Beilstrasse, corner Friedbergerlandstrasse, Frankfort-am-Main.

Another original form is shown in the little cross memorial, "Anna Nudine." The relief cross, with its tapering background slab, is an altogether new form of the cross-tablet. This was executed in dark Labrador granite, hammered; by Rupp & Moeller Granite Works, of Karlsruhe, in Baden, and was designed by Oberbaurat Prof. Dr. Billing, of Karlsruhe.

A distinctly new effect in vase monuments is seen in the exhibit numbered 61, in which the buttressed corners and raised bands lend something of decorative distinction. This was designed by Architect W. Franke, of Karlsruhe, and executed in "Northern Syenite," partly polished and partly hammered, by Ewald Scharf Granite Works, in Gross-Schweidnitz bei Löbau, in Sachsen.

Among the most interesting exhibits shown at the Breslau exposition was a collection of small marble tablet memorials executed by the W. Thust Marble & Granite Works of Gnedenfrei, in Schlesien. Four of these, shown here, are typical of the remarkably interesting, original and varied decorative forms that have been wrought from these simple tablets. These are all executed in "Gross-Kunzendorf" marble from Herr Thust's quarries at Gross-Kunzendorf, Germany. Two other examples of these interesting marble tab-

lets and a view of some of the granite memorials at the Leipsic exhibit are shown in our art design plates in the center of this issue.

A critic, writing in the leading journal of the monumental craft in Germany, has the following to say of the Leipsic monumental art exhibit:

"The Leipzig Cemetery Art Exhibition displays much that is good. It is apparent in every object, that with great diligence, and often with excellent taste, work has been done in the improvement of the cemetery. Notable progress is shown in the use of headstones and there are some pieces of faultless form as well as proper taste, with correct artistic technical treatment. There is so much variety in design that the impression of a glittering shop stock, such as cemeteries in part were and still are, is completely dissipated. Despite the very simple plant decorations (mostly shrubs), these memorials make quite an impressive exhibit. Here, for instance, is a very thin base, with a strictly conventionalized gilded Madonna, or a monument in light green with leaves and a few gold tufts on it; a monument with a small bronze Christ, also little fountains, beautiful urn monuments and the large vault structures of Syenite and many other works.



GRANITE TABLET WITH VASES IN BASE. SHOWN BY E. C. KLUCKEN AT LEIPSIK MONUMENTAL ART EXHIBIT.



ENTRANCE TO HISTORIC MODEL OF OLD GERMAN VILLAGE CEMETERY AT BRESLAU CEMETERY EXHIBIT.



MAIN BUILDING AND SMALL GRAVE SECTION. BRESLAU MODEL CEMETERY EXHIBIT.

"A strange effect is produced by the blood-red Scandinavian granite. It is really somewhat too gay.

"Unfortunately, into this otherwise beautiful exhibition artificial stone, or rather cement productions, have found their way. In a life-size, very well designed group it has even been attempted to closely imitate shell lime with the cement. It is impossible to avoid the question: Was not this design and the model worthy of a piece of genuine stone? If the artist himself does not feel that it is a degradation of his capability that his work shall be executed with a few barrels of cement mortar and deprived of the value they would have if carried out in stone, he is himself helping to bury art. Who attaches any great value to a plaster cast of a work of art? Suppose it is broken—a new one is bought for a small sum, because dozens of them can be cast. But with what care

a marble bust is guarded! It is a real, original piece of work. There are quite a number of cement monuments there. A part of them are very well hidden, at the side. The larger objects, placed in the open space, obtain the attention they deserve of the public—everyone passes them without comment.

"Shell lime is all very well for large monuments, for instance, sepulchral urns, but they must have a large open space for themselves, with suitable vegetation. Used for small objects it has a poverty-stricken appearance. It would have been at once interesting and instructive if the Association of German Granite Workers had allowed a few shell-lime monuments to be set up in the separate division in the midst of the granite monuments. Certainly some of the flatterers and praise-singers of shell-lime monuments would have been silenced."

ASKED AND ANSWERED

An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

Eitolithic Pavement for Park Roads.

Editor Asked and Answered: I wish to ask you if the Sheridan road in Lincoln Park is capable of enduring the heavy automobile and motor truck use, and is this form of road pavement as used in your city capable of sustaining this heavy traffic? I should like to have an authoritative statement to put before our city government that is now considering the matter.—C. C., Mass.

Nearly all of Sheridan road has been provided with a bitulithic pavement, which varies in age from one to eight years. The oldest portion, which was put down by Warren Bros., is still in good condition—apparently as good as when first laid. This road was intended for pleasure vehicles

only, and is not subjected to heavy through traffic, unless automobiles may be considered as such. The crossings, however, have to bear heavy teaming, so that there are places where coal wagons carrying five or six tons cross at frequent intervals. One such place put down two years ago is just as good today as when first laid. Thousands of automobiles pass over Sheridan road each day, and the fact that it has borne this traffic without injury for from one to eight years, shows that it is a good serviceable pavement. O. C. SIMONDS,

Landscape Architect.

Regarding the bitulithic and asphalt macadam pavements on Sheridan road, Chicago, would say that the "bitulithic" pavement was laid between Grace street

and Evanston avenue, a distance of about one-half mile, in 1906. It has been subjected to constant and excessive through traffic, amounting to 5,000 vehicles of different description, mostly automobiles and light pleasure rigs.

The cross traffic, however, has consisted of the heaviest kind of teaming.

The pavement is today in practically as good condition as when put down, and has only been repaired where openings were made for gas pipe or other installations.

The asphalt macadam on Sheridan road was laid by park forces during the summers of 1911 and 1912. This pavement is comprised of graded limestone, coarse and fine sand, bonded with a native ready fluxed asphalt of about 180 degrees melting point.

It was mixed and laid similarly to street asphalt on an old macadam pavement previously scarified and graded. The pavement cost less than 70 cents per square yard, is being subjected to the same traffic conditions as the bitulithic pavement referred to, and is standing the wear thus far with no signs of deterioration, while similar pavements laid in other parts of the Lincoln Park system during 1907-'8-'9-'10 are giving no signs of failing under excessive traffic either of a longitudinal or transverse nature.

Properly laid, these pavements are admirable for light traffic business streets, residential districts, parks and cemeteries. Like all other pavements, however, their integrity depends not upon their names, but upon the adoption of proper specifications and rigid inspection.

M. H. WEST.

We have very little motor truck traffic on our boulevards. However, we have had bitulithic pavement down for eight years with no appreciable wear whatever, and it is my opinion that this type of pavement will withstand motor truck traffic without any detrimental effect on the pavement.

A. S. LEWIS.

Correspondence Study of Landscape Gardening.

Editor Asked and Answered Dept.: Can you refer me to any place or person from whom I can obtain a correspondence course in tree surgery and landscape gardening?—W. C., Ark.

The Home Correspondence School, Springfield, Mass., offers correspondence courses in landscape gardening and forestry, and the Davey Tree Expert Co., Kent, O., advertise a correspondence course in tree surgery. J. J. Levison's recent series of loose-leaf manuals, "Studies of Trees," reviewed at length in our January issue, will also offer valuable practical assistance to any one desirous of studying the care of trees by correspondence.

Following is a communication from the Home Correspondence School, of Springfield, Mass.: "We have made a specialty

of the teaching of agriculture, horticulture and related branches by correspondence for many years and we have been very successful in this department of our work. Our courses in horticulture, floriculture, landscape gardening, forestry and botany are taught by professors in the department of horticulture of Cornell University. Prof. Bailey was our first horticultural teacher. He was succeeded by Prof. Craig. Following the untimely death of Prof. Craig, Prof. Beal took charge of the work. The courses in floriculture and landscape gardening are taught by Prof. Beal, who is now acting head of the department of horticulture of Cornell. The courses in horticulture, forestry and botany are taught by his assistant, Prof. Wilkinson. While our course in landscape gardening is by no means an advanced course in landscape architecture or landscape engineering, it is a good practical, helpful course. The fee is \$12. This includes text book, lesson outlines, stationery and instruction covering the full twenty lessons of the course. Following is an outline of the course:

"Lesson I. Locating and Planning the Home.

"Lesson II. Preparing the Lands and Making the Lawn.

"Lesson III. Trees: Their Uses and Preparation for Planting.

"Lesson IV. Planting, Arrangement and Care of Trees.

"Lesson V. Shrubs, Hedges and Hardy Climbers.

"Lesson VI. Walks, Drives and Roadside Improvements.

"Lesson VII. Renovating and Improving Old Homes.

"Lesson VIII. Parks, Public Squares, School Yards, etc., Continued.

"Lesson IX. Study and Description of Trees.

"Lesson X. Lawn and Shade Trees.

"Lesson XI. The Study of Trees, Continued.

"Lesson XII. Evergreen Trees.

"Lesson XIII. Hardy Ornamental Shrubs.

"Lesson XIV. Evergreen Shrubs and Climbing Vines.

"Lesson XV. Hedge Plants and Hardy Herbaceous Plants.

"Lesson XVI. Tender Plants, Aquatics and Hardy Ferns.

"Lesson XVII. Insect and Fungi.

"Lesson XVIII. The Home Fruit Garden.

"Lesson XIX. Outdoor Studies and Discussion of Important Points of Course.

"Lesson XX. Outdoor Studies and Review."

Some of the leading institutions offering complete residence courses in landscape architecture and forestry are: Harvard University, Cambridge, Mass.; Yale University, New Haven, Conn.; University of

Illinois, Urbana, Ill.; Cornell University, Ithaca, N. Y.; Ohio State University, Columbus, O.; Massachusetts Agriculture College, Amherst, Mass.; Michigan State College of Agriculture, Agricultural College, Mich.; Iowa State University, Iowa City, Iowa.

Sprinkling System and Tool House.

I wish to get some information in regard to a sprinkling system for cemetery; also wish to get plans for a tool house for cemetery, bungalow style. Any suggestion as to where we can get desired information will be appreciated.—L. M. T., Ia.

For lawn sprinkling devices and cemetery water supply systems, correspond with The Spray Engineering Co., Dept. P., 201 Devonshire St., Boston, Mass., and Kewanee Water Supply Co., Kewanee, Ill. Regarding the tool house it would scarcely be possible to find stock plans that would suit your proposition. The best way would be to select an inconspicuous and convenient place on the grounds, figure out the arrangement you require for your tools and get a local architect to draw the plans you require. One superintendent says: "We use our barn and the furnace room under the office for a tool house. It ought not to be difficult to plan a tool house. I would want it convenient to my work, and in a place where it would not be unsightly."

LANDSCAPE STUDY in BOSTON PARKS and GARDENS

The School of Landscape Architecture of Harvard University has recently issued an illustrated brochure, "Exceptional Opportunities for Field Study; Examples of Landscape Design in the Vicinity of Boston," that emphasizes and illustrates many of the historic examples of landscape architecture in the parks, reservations and private estates about Boston.

Harvard University offers exceptional opportunities for the study of landscape architecture, including city planning, in its school of landscape architecture; in courses of study and research given in other departments of the university, and in the notable examples accessible in the vicinity of Boston, of all the more important phases of landscape design, both private and public.

Boston is an exceptionally instructive city for study in city planning, as it contains examples, good and bad, of solutions of the great majority of the problems that may confront the designer in this field; and many projects for improvement, regulatory and constructional, including port development, are now under way. The system of municipal and metropolitan parks is one of the most completely organized systems of public recreation spaces in the world, and the prototype from which practically all others in the United States have sprung. In this system, each separate unit plays its own part, taking its character from its natural conditions. And

the development for public use has enhanced and completed these unusually varied natural units—woods, fields, ponds, rivers, seashore, and so on—and emphasized in each case the distinctive characteristics which serve the chosen function. In the residential neighborhoods of Boston, such as Brookline and the North Shore, are some of the best-known private estates in the country. In fact, the Metropolitan District contains to an almost unrivalled extent instructive examples of many types of residential development from the simplest and least expensive to the most complex and costly.

This pamphlet contains, as examples of these opportunities for study on the ground, photographs of private estates and gardens, recreation areas, parks, and parkways, and of country and seashore reservations, all within easy distance of Boston.

The more important problems in the Harvard School of Landscape Architecture are worked out by actual study of the ground, with topographic maps of the areas chosen for development. The illustration of the Hoosicwhisick Pond shown here presents a view from one of the areas so used.

Outside the ring of Boston's municipal parks lie its metropolitan reservations, their natural beauty secured for future generations and now being made accessible to the population by the construction of roads and paths, built with as little damage as

may be to the appearance of the ground.

Of the recreation areas necessary in the thickly settled portions of a great city are the athletic fields and playgrounds used intensively, sometimes for forms of exercise or play demanding special provision, such as the bowling-green shown in this illustration of Franklin Field. The playgrounds and other public recreation areas of Boston, taken together with the grounds for college athletics such as Soldiers Field, provide in this way for an unusual variety of outdoor sports.

In the larger parks—the very object of their existence being to give relief from the formal, crowded, restricted city—the purpose of the designer must be to give an effect of freedom, naturalness, and space. The subordination of the necessary roads, buildings, and so on is especially important, although this is difficult in the park, where the circulation of large numbers of people must be provided for. The Boston parks are a particularly fertile field for the study of these problems.

The rapid spread of the serious study of landscape design and the exceptional opportunities which Boston and its vicinity offers for study on the ground, in connection with graduate university courses, give this pamphlet an unusually general interest. Copies may be obtained by addressing the School of Landscape Architecture, Harvard University, Cambridge, Mass., and enclosing four cents in stamps.



Courtesy of Metropolitan Park Commission

Plate XVI

HOOSICWHISICK POND AND GREAT BLUE HILL, BLUE HILLS RESERVATION



Courtesy of Metropolitan Park Commission

Plate XV

RAVINE ROAD, MIDDLESEX FIELDS RESERVATION

INTERESTING PLAN FOR CEMETERY ADDITION

The plan recently prepared for an addition to a cemetery in Eau Claire, Wisconsin, is a very interesting problem, because of the fact that the present plat of this cemetery was laid out fifty years ago and the lots are uniformly 10x20, whereas the new platting of the tract secures more lots and at the same time more open space. The location is ideal and the view from the bluff of Half Moon Lake is as fine as there is in the City of Eau Claire, looking over the entire Chippewa Valley to the opposite hills, about three miles away. The plan was made by Charles H. Ramsdell, of Minneapolis.

One of the first problems to be solved was to take care of certain public traffic which now goes undisturbed across the new addition. The next problem to be considered was the present unsatisfactory entrance road leading North to the Elk Creek road and thence to the city. It is proposed to take a strip along the top of the bluff at Half Moon Lake, making it quite a little shorter as well as a most attractive drive and entrance road. Then, too, on the north side of the cemetery space should be taken providing for this new road, which would give entrance to both plats of the cemetery and access to

the proposed public road on the west of both of them. This public road on the west will occupy the most unattractive portion of the new addition, being on the sides of a low valley beyond it. The land slopes gently from northeast to southwest, although it is nowhere very abrupt.

The problem of the use of the outlying lands which were not available for burial purposes is treated so that the public would have access to the shores of Half Moon Lake, which is likely to become a considerable park area of the city. As the growth of this new addition will be rather slow, it is endeavored to make each section fairly complete; in other words, whenever there is need of an addition to the cemetery one section would contain large lots, medium sized lots, small lots and a small provision for single graves. Then later when the cemetery was well improved and in constant use the largest area for single graves would be found on the extreme west boundary of the new addition.

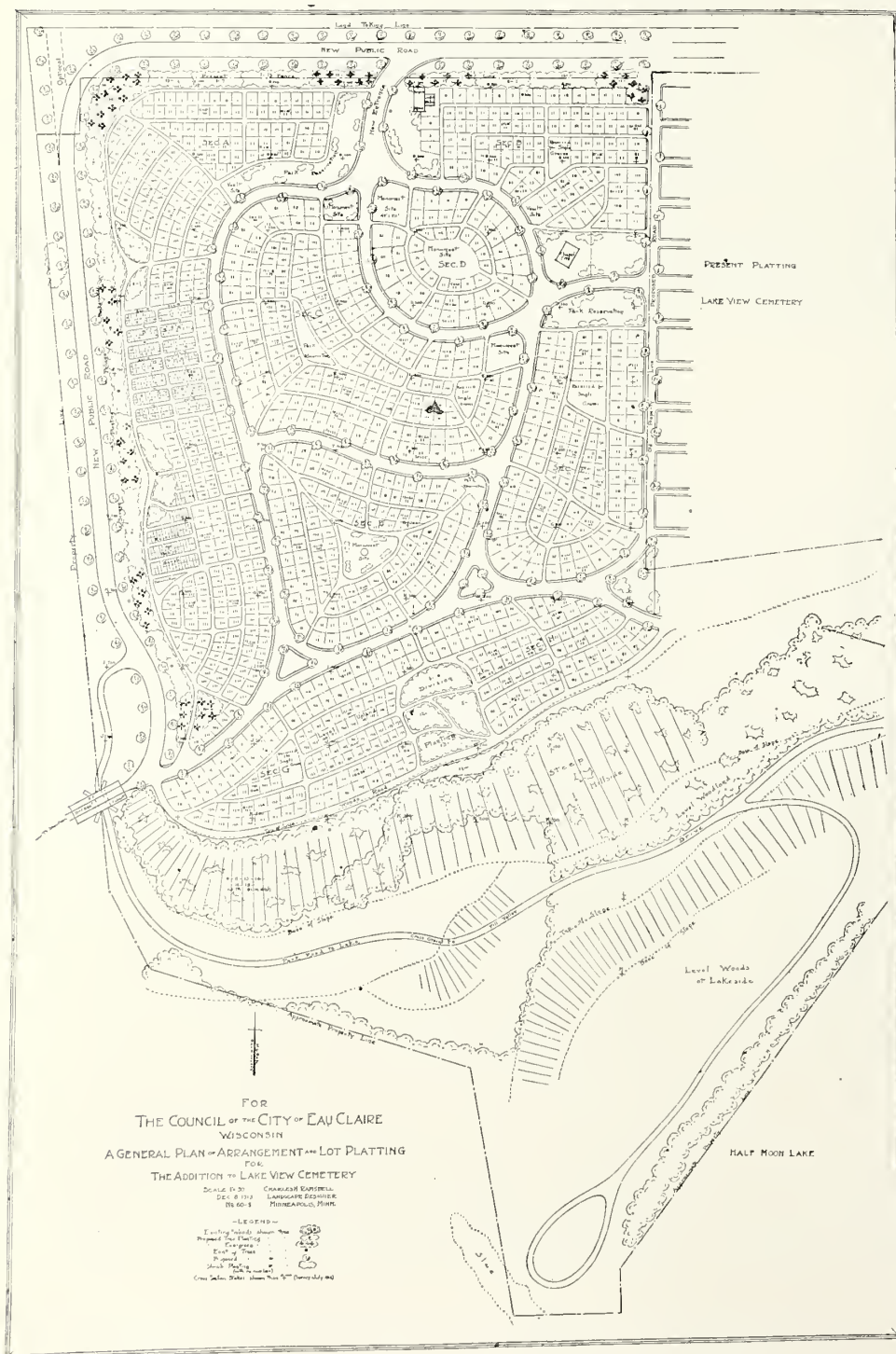
Extremely large sections are avoided and in the case of Section H planting is introduced to break up the extreme length of the otherwise long section. Border plantings are provided on the west and north for the purpose of breaking the winds as well as giving a background for the entire cemetery.

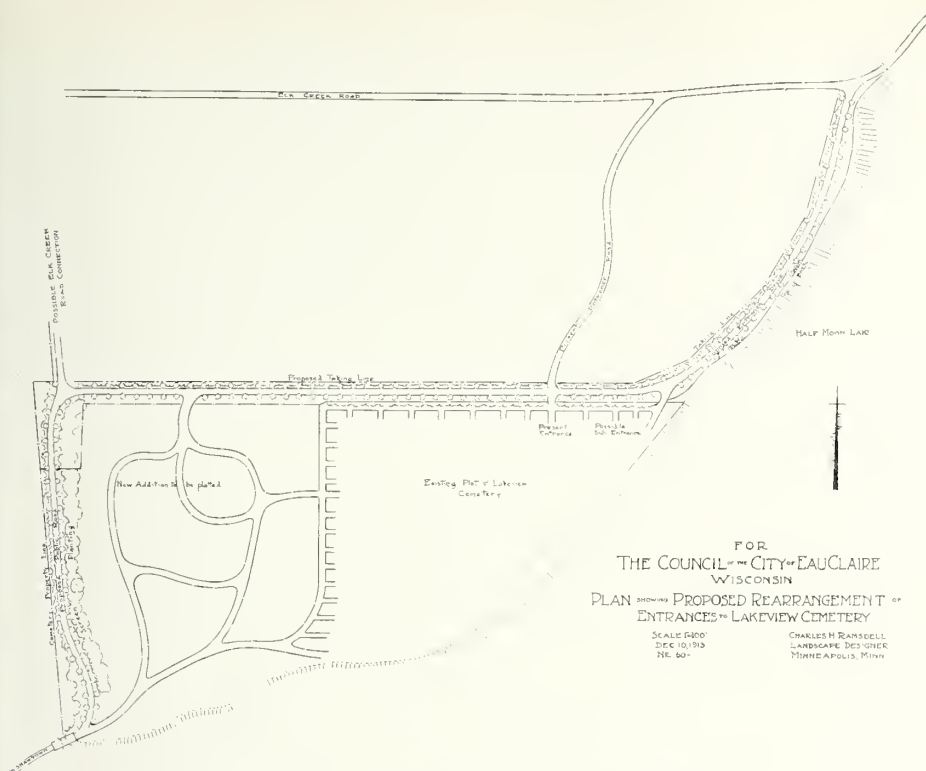
The usual provision is made for parking small areas, for chapel sites, for monument sites, and for attractive open spaces looking forward to the lawn or park-like development of this new addition.

The roads are laid out 20 feet wide, which would subdivide into two 3-foot strips for grass and the necessary trees, and a 14-foot pavement, which would enable two teams to pass with safety. All the paths are laid out five feet wide, enough for a one-horse cart to pass everywhere in case of necessity for the moving of soil, leaves, etc. The new addition does not contain more than about twenty trees, all of which are very good specimens of Red and Burr Oaks.

It is intended to lay out at once all the drives according to plan and then to consistently carry out at once the scheme of tree planting and screen planting for this new addition, so that while it may be some years before all sections of the cemetery are in use the trees will be growing up, and it will be in a most attractive condition in about 15 or 20 years of such development.

It was deemed unwise to modify the present plat of Lake View Cemetery because of the fact that the lots are now all sold and each lot is used almost to its fullest capacity. The comparison of these two plats will indicate the benefits of the development of a cemetery along the lines of park-like development as com-





pared to the old-fashioned rectangular platting of some years ago.

Following is a comparison of areas on the plans of the old and new cemeteries:

Old plan of Lakeview: 1,205 lots—Lot area, 321,770 sq. ft., or 5.61% of total area. Road and path area, 251,530 sq. ft., or 43.9% of total area. Total area, 573,300 sq. ft., or 13.17 acres. 267 ft. per lot.

New plan of Lakeview: Lot area, 440,353 sq. ft., or 58.3% of total area. Road area, 124,752 sq. ft., or 16.2% of total area.

Path area, 90,931 sq. ft., or 12% of total area. Park area, 103,374 sq. ft., or 13.5% of total area. Total area, 759,410 sq. ft., or 17.42 acres. 414 feet per lot.

Lots and single graves: 988 4x8 ft. single graves; 185 20x25 ft. lots; 307 18x20 ft. lots; 557 15x18 ft. lots; 39 12x15 ft. lots; 1,088 lots in all. One chapel site; six monument sites; one vault; two comfort houses.

This estimate does not include the land not available for cemetery purposes.

PARK COMFORT STATION OF SMALL COST

A very simple, inexpensive type of park comfort station that will interest park and cemetery managers whose funds are limited is illustrated here. This comfort station in the park at Hopedale, Mass., cost \$1,471.20, of which the building itself cost \$631.93, and the plumbing, sewerage and drainage, \$839.27.

The building is divided into two compartments for the use of women and men. In the women's side, there are four bowls; on the men's, three and an urinal.

The building is shingled outside, and stained a dark brown. The same staining is used on the inside finish. There is a partition between the two sides in which the plumbing arrangements are placed, there being an opportunity to shut off direct from the street mains for all the closets and bowls, and a separate shut-off for each fixture.

The floor is cement, so that all that is necessary to clean out the building is to attach a hand hose and flush.

It is open to the use of the public afternoons, evenings and holidays, when a caretaker is in charge.



SMALL COMFORT STATION, IN HOPEDALE, MASS., PARK SYSTEM.

AMHERST LANDSCAPE GARDENING EXHIBIT.

There was recently held under the auspices of the Massachusetts Agricultural College in Amherst, Mass., a very interesting landscape gardening exhibition. This was really a civic art show, the main object being to arouse interest in problems of civic improvement here in this community. The exhibit was prepared by students of the department of landscape gardening and especially by the class studying civic art. The most important group of plans were those devoted to various improvements in Amherst, such as designs for two new playgrounds, location of new post office, improvement of parish house grounds, school grounds, etc. These proved to be of great interest to the citizens of the town.

Along with these there was a splendid exhibit of school grounds throughout the state of Massachusetts and nice exhibits from Harvard University School of Landscape Architecture and from the University of Illinois. There was also a very interesting group of plans prepared by Mr. John Nolen, landscape architect, of Cambridge, Massachusetts, and another very interesting group prepared by an old Amherst student, Louis Brandt, during his residence in the University of Liverpool, England.

The room was tastefully decorated by the department of floriculture and by the students in the landscape gardening class. The exhibit was largely attended, and on account of its novelty and its local applications aroused wide interest. This is something a little new in the line of college extension work, and, of course, cannot be undertaken in many places, but the results in this case were entirely satisfactory.



OLDWOOD CORNER IN OAK WOODS, SHOWING LAKE SHORE TREATMENT.

LANDSCAPE EFFECTS

One of the handsomest of the fine illustrated descriptive books issued by any of the modern cemeteries has just been published by Oak Woods Cemetery, Chicago.

It is not only an art portfolio of beautiful landscape pictures, but contains much interesting information and descriptive data about the cemetery grounds, and intelligent, informative discussion of cemetery matters.

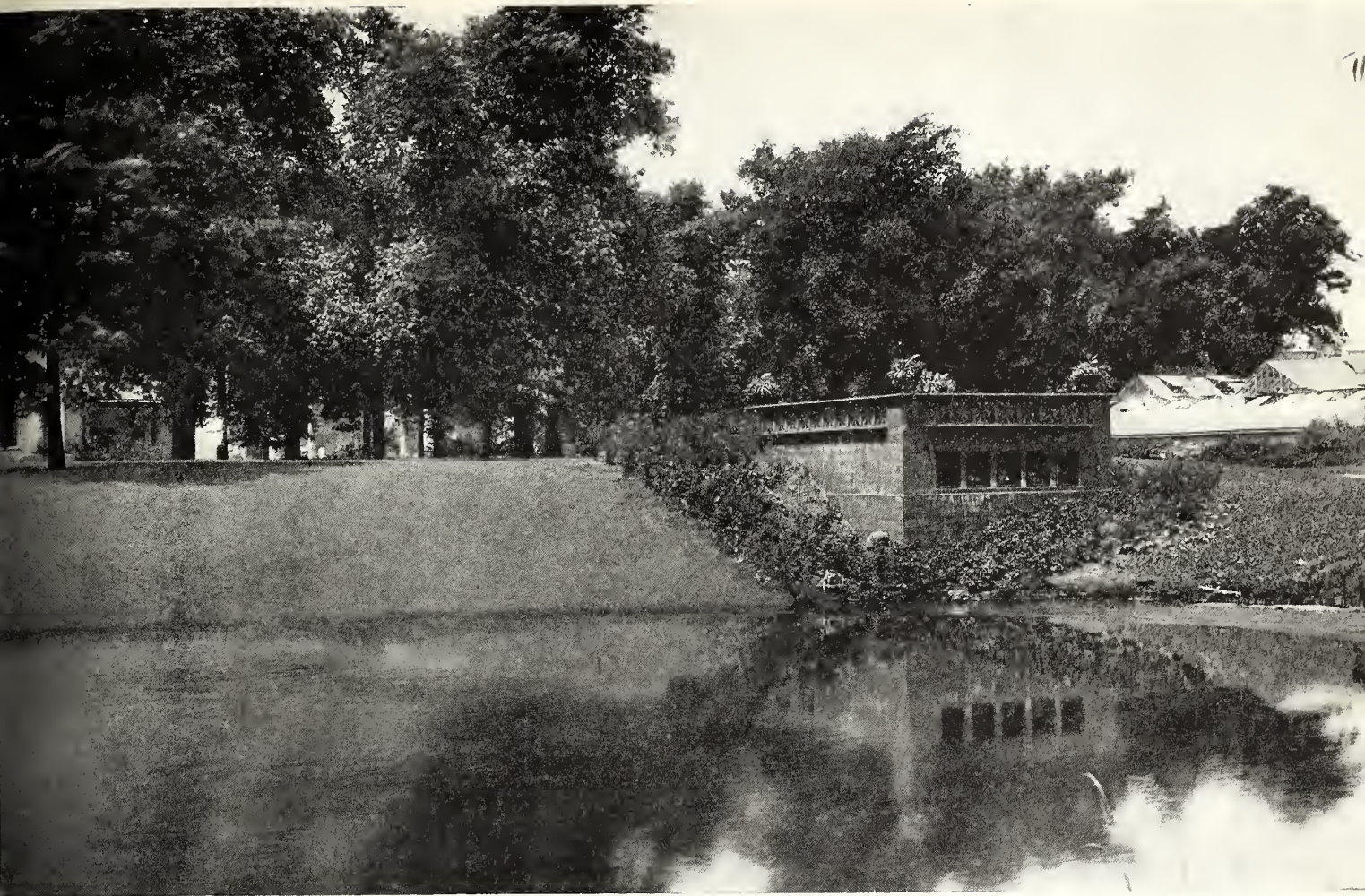
Oak Woods is the nearest cemetery on the South Side, within the city limits, and by the terms of its charter is protected against any manner of encroachment from without or violation of its purposes within. The charter provisions are supplemented by wisely drawn rules, which have stood the test of a generation of experience in giving the best results in the development and maintenance of a metropolitan cemetery.

In the management of Oak Woods every provision has been made for the comfort and convenience of its patrons, as indicated by its various departments, while the physical beauty of the grounds is the product of the best thought obtainable, together with the expenditure of unlimited means and the development of years of time.

Here may be found examples of stately landscape, where the purpose of the place



LOOKING ACROSS THE LAKE IN OAK WOODS.



THE POWER HOUSE HAS BEEN MADE AN ATTRACTIVE FEATURE OF THE LANDSCAPE.

OAKWOODS, CHICAGO

is revealed by the glimpse of a dignified tomb or mausoleum, but where this purpose is not permitted to dominate the natural beauty of the view. Or again, a wildwood corner is shown, liberal areas being allotted for ornamental treatment, so that the necessities of the place are momentarily hidden.

The use of water-effects in the landscape has been given liberal expression, with the result that four separate lagoons of large area enhance the beauty of the place.

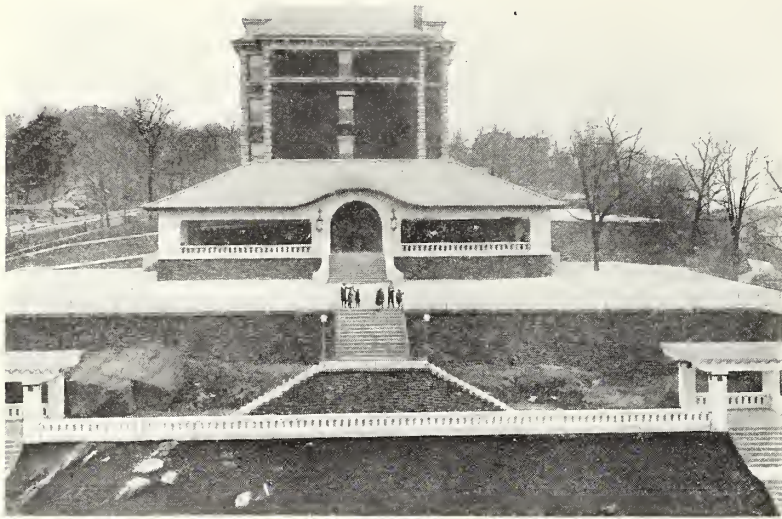
The crematory at Oak Woods is a perfect plant in a building that is a model of convenience and comfort, combined with beauty of architecture. The crematory and chapel have previously been described in *PARK AND CEMETERY*.

Not the least in point of interest to the lot-owners is the power house at Oak Woods, for to its unequalled water supply is due much of the beauty maintained in the grounds. As shown in the view, the building has been made a unique feature of the landscape, while the power used—electrical centrifugal pumps—eliminates everything objectionable in connection with pumping water in the cemetery. The supply of water within the cemetery is inexhaustible and insures the results in appearance guaranteed by the cemetery contracts for perpetual care.



TREES AND CORNER OF LAGOON IN OAKWOODS.

AN UNUSUAL PARK CONSTRUCTION PROBLEM



PAVILION IN COLUMBUS PARK, YONKERS, N. Y.

Columbus Park, Yonkers, N. Y., has lately been completed excepting the planting from the designs of Harold A. Caparn, landscape architect. The treatment is unusual and interesting, arising from the necessity of making a very steep and rough piece of ground serve the purposes of a large number of people. This can only be done by providing adequate level spaces, where people can walk and sit and children play. How this is done will be clear from the plan and photographs. Under the central steps of the plaza is the tool house, and under the plaza are the comfort rooms, avoiding the need for separate structures, which would be excrescences in the park. The general form of the ground will be plain from the number of steps required to reach the upper levels. These steps have 12-inch treads and 6-inch risers, a proportion that has been found workable and satisfactory for outdoor steps, where the horizontal distance is relatively short. Where it is not, steps with shallower risers and deeper treads would be better.

The surrounding population is largely Italian, whose social qualities and appreciation of outdoor life are usually well developed; and to provide them with a meeting place for themselves, their families and societies, to serve as a concert room, a place for folk dances and many other purposes, the large pavilion, 95 feet long, was built, commanding a superb view of the Hudson river. The rectangular openings, 33 feet long, were made to give as many people as possible a sight of the scenery unbroken by piers or columns. The walls, or rather piers and girders, are of reinforced concrete covered with stucco, encrusted with white marble screenings. The roof is of green tiles and the whole structure is cheerful and striking in effect. The pergolas and balustrades are of a very fine white concrete and all the fences and lamp standards are painted light green, and green tiles are set into

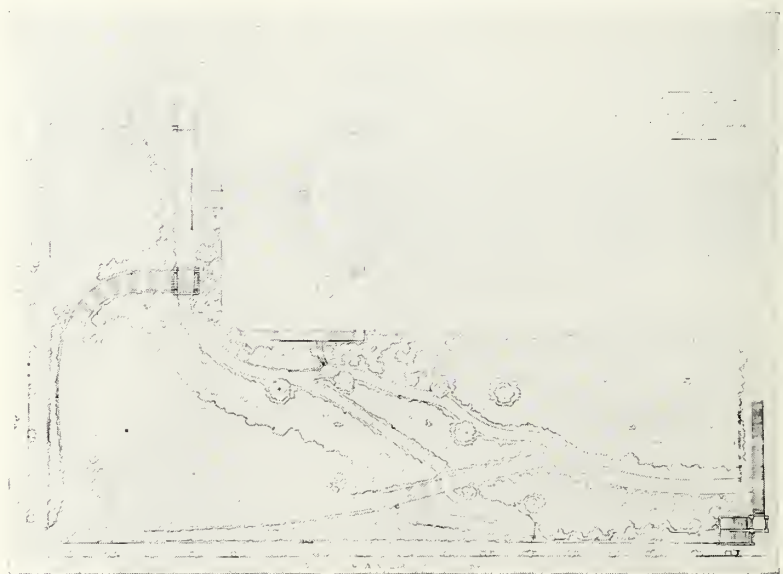
the piers of the pergolas and fence. The walks are of brick, as being of a better color than asphalt and more durable. Generous planting is plainly necessary to mitigate all the massive masonry, but it is not yet set out, and will take several years growth to materially change the effect of the park; and perhaps when that happens a new set of pictures, showing the park clothed and complete, may be an interesting contrast to those printed here.

DUBLIN CITY PLAN COMPETITION.

One of the most interesting city planning competitions ever offered to landscape architects and city planners has just been announced. The conditions have been very carefully compiled by the technical and advisory committee of the Housing and Town Planning Association of Ireland, with the expert advice of Professor Patrick Geddes, of Edinburgh, and Mr. John Nolen, M. A., Sc. D., landscape architect, of Cambridge, Mass. These two

gentlemen will also, by request of the Lord Lieutenant of Ireland, act as adjudicators, and they will have as a colleague, Mr. Charles McCarthy, Fellow of the Royal Institute of the Architects of Ireland, City Architect of Dublin. It is evident that a good deal of public interest in the matter has been evoked, and applications from intending competitors are already being received.

This is one of the most attractive opportunities that has been thrown open as a general competition. The city itself is extremely interesting, and yet it is confronted with the most serious town planning problems, especially in the rehousing of the very poor. His Excellency, the Earl of Aberdeen, the Lord Lieutenant of Ireland, has offered a prize of 500 pounds for the best plan. It is hoped that two other prizes will be offered, one of 200



GENERAL PLAN OF COLUMBUS PARK, YONKERS, N. Y.

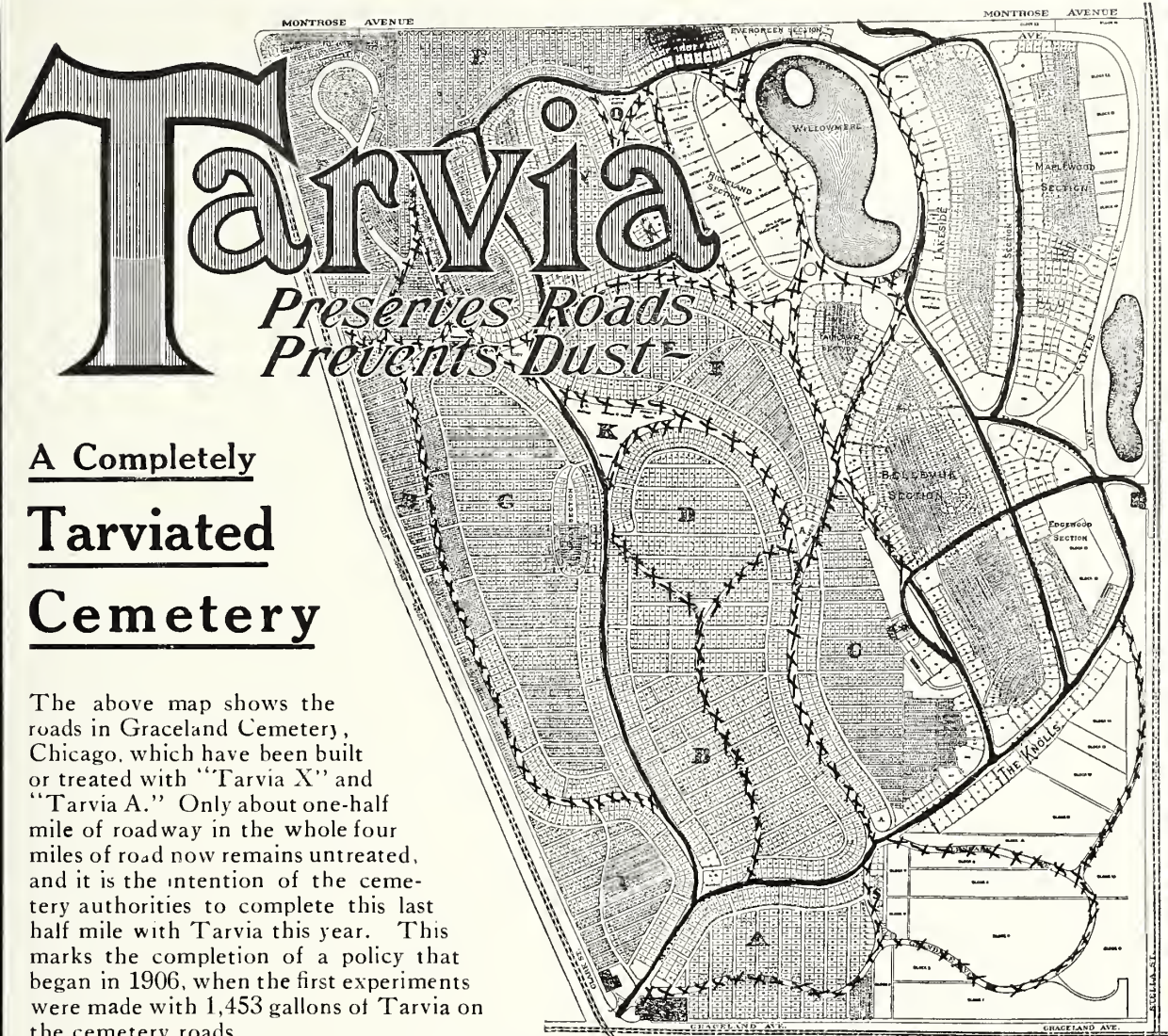
pounds and one of 100 pounds, but these have not yet been secured. It is possible that one or both of these prizes may be offered in this country.

Detailed information and copies of the conditions of competition may be had from Eric Kaye-Parry, Esq., Secretary, Town Planning Competition, Civic Exhibition, Dublin.

A. A. C. S. ST. LOUIS CONVENTION DATES.

Editor PARK AND CEMETERY: Please state in your next issue that the dates for the St. Louis convention of the Association of American Cemetery Superintendents will be October 6, 7 and 8 next. The convention committee has not arranged the details, but will hold a meeting next week for this purpose.

One important feature of this convention will be a visit to the Missouri Botanical Garden. Papers are promised from the professors of this institution and the Washington University. BELLETT LAWSON, JR., River Grove, Ill. Secretary.



A Completely Tarviated Cemetery

The above map shows the roads in Graceland Cemetery, Chicago, which have been built or treated with "Tarvia X" and "Tarvia A." Only about one-half mile of roadway in the whole four miles of road now remains untreated, and it is the intention of the cemetery authorities to complete this last half mile with Tarvia this year. This marks the completion of a policy that began in 1906, when the first experiments were made with 1,453 gallons of Tarvia on the cemetery roads.

The 1906 results were such that about 8,000 gallons of Tarvia were used in 1907. Then the policy was adopted of pushing the extension of the Tarvia work until every road had been treated. It has been a consistent and successful policy. The amount of Tarvia used during 1912 was nearly 25,000 gallons and the total amount used during the seven years was 130,000 gallons.

Geo. L. Tilton, the Superintendent, a leading authority on cemetery problems, has reported the Tarvia work to be satisfactory year after year.

The reasons for adopting Tarvia were its cheapness, results considered, its ability to withstand the haulage of heavy monuments and automobile traffic, its waterproof surface, which resulted in instant drainage, leaving the roads in a fit condition for pedestrians immediately after a rain; its quietness, its fine, smooth, well-kept appearance, and most of all, its low maintenance cost as compared with plain macadam.

Tarvia is a special preparation of coal tar for road use. It forms a tough plastic matrix between the broken stone and prevents erosion by water and traffic.

Successful also for parks, boulevards, suburban streets and country thoroughfares. *Booklets on request.*

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Key to } Black line (—) shows "Tarvia A" Roads;
Above Map } Crosses (XX) shows "Tarvia X" roads.

COURT DECISION ON PROHIBITING INTERMENTS

(Continued.)

Maps were exhibited by the plaintiffs showing from the records of the Board of Health the location of every case of diphtheria, typhoid and scarlet fever in the city during the years 1909 and 1910. There was no undue proportion of cases in the neighborhood of Union Cemetery, and much less than in some sections of the city.

That the neighborhood in which Mount St. Mary's Cemetery is situated is all built up; almost without exception the buildings are residences and they are practically all occupied. That neighborhood is better built up than is the one around Union Cemetery.

That the territory in the neighborhood and surrounding St. Peter and St. Paul's Cemetery is almost exclusively a residence section; it is densely populated.

And the same is true of the neighborhood surrounding Elmwood Cemetery.

As to the contiguity of business houses to Union Cemetery, the evidence showed that there were a few as far south as Twentieth street, but from Twentieth to Thirtieth street on Main and Grand avenue there were scarcely any. On Main, from Thirtieth to Thirty-third street, there were quite a number of retail houses, and on Thirty-first street there were some. The entrance to one of the public parks of the city is across Main street, nearly opposite the northwest corner of the cemetery; it is about 600 feet from the south line of the cemetery before any business houses are reached at Thirtieth street and a half mile from its north line to any considerable number of business houses on Grand avenue.

That no complaints were ever made of an unsanitary condition of the cemetery. Dr. Cross, the official city chemist, a witness for the defendants, testified that during the time he had held that official position he had never heard any complaint relating to the condition of the cemetery.

Dr. Carl A. Johnson, a witness for the defendants, a member of the Common Council, chairman of one of its sanitary committees, and for three and one-half years immediately preceding August, 1908, health officer of the city, said that while he was such health officer he never heard any complaint as to the sanitary condition of the cemetery.

And Mr. John F. Ward, the alderman from that ward, although his business and residence for four years had been within a block and a half of the cemetery, testified that he never knew or heard that anything was wrong with it until this ordinance was introduced. This was in June, 1910, and the ordinance passed in less than a month. He said he was simply working for "my people that I am representing," and he regarded the cemetery as "a drawback to that end of Kansas City."

In this connection, the plaintiffs introduced in evidence that provision of the city charter creating the hospital and health department, which places it under the management and control of a hospital and health board composed of three members, who must "be selected with reference to special fitness for the position," with an executive officer known as the health commissioner, who must be a physician.

This board is given full power and control over matters relating to the public health of the city; is vested with large powers and charged with important duties. Among other things, it is within its powers and is its duty to regulate the sanitary condition of cemeteries within the limits of the city, and to recommend to the Common Council the passage of such ordinances as it may deem necessary for the preservation of the public health.

That regarding this cemetery no recommendation was ever made by it or to it; none of its members appeared as a witness in this case; even the health commissioner was not a witness, although he is a defendant in the proceedings.

The plaintiffs introduced much more evidence of the same general character as that heretofore mentioned.

The defendants introduced evidence tending to show the unsanitary condition of the cemetery, in order to justify the passage of the ordinance as a police measure in the interest of public health.

Dr. Horigan, the principal witness for the defendants, testified that he was a physician and owned the property on Main street, at the corner of Thirty-first, two blocks south of the Union Cemetery. That he was one of the persons who signed one of the petitions to the Common Council, asking the passage of the ordinance complained of, for the reason "that the expansion of Kansas City is injured by the fact that Union Cemetery lies exactly in the path of the city's greatest development,"

and that "its continued use is greatly detrimental to property interests in that section of the city," and is "against property values."

That, in his opinion, "Union Cemetery is in a very unsanitary place." That he had observed pools and ponds of water on the north side of the cemetery, and that, in his opinion, it was in an unsanitary condition.

Disease germs are buried with the dead, and if bodies are not buried deep, or if the water-shed is such that water carries the germs and distributes them to the living, sickness and death result. Germs are usually carried in two ways: through water supply or by means of rats, mice, flies and domestic animals. That the drainage of Union Cemetery into pools and ponds to the north side of the cemetery is unsanitary; that the blue scum over these pools and ponds indicate bacteria and diseased breeding germs, which may be widely scattered.

That he selected the ground on the west side of Main street, within 300 feet of Union Cemetery, and there built St. Mary's Hospital, the largest and most modern in the city, in which he keeps and treats his sick patients, about 200 in number. And when asked why he built his hospital there, if it was so unhealthy, he answered that it was convenient for burial purposes in case any of his patients should die.

That he did not know that there were actually any germs in the pools mentioned or that any disease had been caused thereby.

W. B. Mumford, who kept a drug store for about a year on the corner of Twentieth and Main streets, also smelled something. He was perfectly satisfied that it came from the cemetery; there was "a sickening, disagreeable odor all the time from that section." But when he went into the cemetery itself he did not notice smell.

(To be continued.)



From the Park Reports.

The annual report of the Park Commission of Wilmington, Del., shows expenditures of \$28,035 for the year's work. Considerable regrading was done in North Brandywine to make four new baseball diamonds. The earth removed, together with all that could be secured from building operations, has been used to fill in the valley west of Franklin street. The road from Eighteenth street at Franklin to the Park Drive has been relocated, curbed and guttered. Stone curb and a six-foot concrete sidewalk has been laid along Eigh-

teenth street from Van Buren to Franklin streets, a distance of about 600 feet. This work, which has taken about sixteen months, has involved the handling of about 40,000 cubic yards of earth, soiling, seeding and sodding, has cost over \$15,000. Five park playgrounds were in operation. The officers of the board are: William P. Bancroft, president; Edward R. Mack, engineer and superintendent; Jennie M. Weaver, playground supervisor.

The annual report of the Park Commission of the city of Fitchburg, Mass., mentions the following principal improve-

Clow Fountain In Jackson Park



CLOW FOUNTAIN IN JACKSON PARK, CHICAGO

A USEFUL ORNAMENT

THE design and appearance of the Clow Bubble Drinking Fountain adds to and enhances the beauty of well kept lawns and shrubbery.

The sanitary features of the
CLOW BUBBLE DRINKING FOUNTAIN
caused the City of Chicago to select it after any number of others had been tested. Clow fountains are installed in Chicago parks and streets.

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Harrison Street Bridge **CHICAGO**

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SYSTEMATIC
DETROIT, Mich.

"Systematic" Truly Leads
Send for Catalog to CEMENT MACHINERY CO., Jackson, Mich.
Accurate Proportions—Thorough Mix—For any Material

WEEDS are often undesirable in ponds, streams, rivers lakes, etc. Please notice the simple and effective operation of the **Submarine Weed Cutting Saw** above. The weeds are cut at the roots and floating down stream. The device may be handled in lengths to a great extent from the banks, or just as well from boats on larger lakes. In use by many Parks and Cemeteries, and highly recommended here and abroad. Write for illustrated circular, references, etc.



Gold Medal, Belgium, 1909 Silver Medals, Austria, 1909; Pueblo, Col., 1910

ASCHERT BROS., Cedar Lake, West Bend, Wis.



Coldwell Motor Mowers in Prospect Park, Brooklyn, N. Y.

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THE United States Government on its parks and reservations, Golf and Country Clubs, and owners of Private Estates all over the country are using the

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They find it the best and most economical equipment for caring for large stretches of lawn.

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COLDWELL LAWN MOWERS

ments: Grading of South Fitchburg playground; the completion of a new plan for Coggs Hall Park; the establishment of a workshop for the department; the purchase of an automobile for the use of the superintendent, and the improved arrangements in the office. The chief feature of the work at Coggs Hall Park was the completion of the survey and plan for its future development on plan and recommendations made by H. A. Reynolds, of Boston. Following the recommendation for a concrete dam 200 feet south of our present temporary structure, work was started and the core wall completed before winter set in. Early in the spring a considerable amount of work was done on the land cut off during the winter. This was the last of the land burned over several years ago. Twenty thousand white pine seedlings, 6,000 red pine, 3,000 Norway spruce and 3,000 Douglas fir were set out. The cost of this work, including the trees themselves, was \$200.45, or \$6.26 per M. Only the best plants were used for planting in permanent locations. All the culls, amounting to something over 18,000, were lined out in the park nursery. D. S. Woodworth is chairman of the board, and William W. Caltou, superintendent, city forester and clerk of the board.

New Parks and Improvements.

J. J. Culbertson has had plans prepared by a landscape architect for the improvement of two small triangular parks near his residence at Stonewall avenue and East Thirteenth street, Oklahoma City, Okla. The design calls for a pagoda or shelter which will serve as a waiting station, provided with a drinking fountain and seats. The walks are to be eight feet wide and slightly winding, banked with shrubbery in the curves, and so bordered with one row of trees that the entire length will be in the shade from eight in the morning until sundown. Seats will be provided just off the walk and under the trees. All formal planting has been avoided except between the street walk and curb, where the curbs and border walks are on straight lines.

The Council of Columbus, O., will be asked for a \$10,000 bond issue to be added to the Franklin Park fund, with which to construct a \$27,000 shelter house and recreation center in the park. Plans have been prepared by Architect J. A. Jones.

Two additional lots for Exall Park have been purchased by the City Park Board of Dallas, Tex. The Kidd Springs property, embracing 19.52 acres, and options upon 13.2 acres adjoining, with small holdings that may be condemned, constituting a parallelogram of thirty-six acres, is also being offered to the city for park purposes at approximately \$2,000 per acre. This includes the lake and springs and all improvements on the Kidd Springs property. Included in the Kidd Springs property is a

lake of clear water, covering some four acres, fed by large springs. It is estimated that an artesian well furnishing the same flow would cost not less than \$25,000. There also is a natural and beautiful grove of trees.

George H. Hermann is having the deed prepared for the 285-acre park site he is to give the city of Houston, Tex. The

park will be known as the George H. Hermann Park.

Herbert J. Kellaway, the Boston landscape architect, has prepared an interesting plan for the development of a civic center in Winchester, Mass. It includes a plan for the grouping of the public buildings near the Aberjona River and Mystic Valley Parkway.

CEMETERY NOTES

Greenwood Cemetery Knoxville, Tenn., has issued a very fine series of colored post-cards illustrating in natural colors some beautiful scenes in the grounds. Greenwood recently held its eighth annual "Flower Day," that was celebrated with interesting and beautiful exercises. Flowers were strewn upon all graves by friends and relatives. Preceding the strewing of flowers a musical and literary program was rendered in the cemetery chapel. The feature was an address by Rev. Henry Clay Risner, D. D., pastor of the Broadway Baptist Church, who paid tribute to the memories of those who have passed to the great beyond. After the singing of the hymn, "Nearer, My God, to Thee," Rev. French Wampler offered invocation. Miss Lillian McMillan Lewis sang a very beautifully, after which Dr. Risner spoke. "Whispering Hope" was sung by Mrs. Zemp and Miss Conner. The exercises were concluded by the congregation singing "Wait and Murmur Not," and the benediction. Those present then strewed flowers on the graves.

Suit to throw the Rosehill Cemetery Co., of Chicago, into a receivership, bring about an audit of the company's books and restrain the erection of the mausoleum now under construction at the cemetery was filed in the Circuit Court May 22 by Wesley Dempster and a group of stockholders in the company. It is alleged that a certain fund, known generally as the "care fund," was established to provide for the perpetual upkeep of lots in the cemetery. This fund, the bill alleges, is approximately \$700,000, and is invested in certain approved securities. It is charged in the bill that after May, 1912, certain members of the cemetery company purchased approximately 2,500 shares of stock for \$57,208 and conspired to form a company of their own. In furtherance of this plan, it is alleged, a wholesale selling of the approved securities was commenced for the repurchase, in some instances from themselves or from the institutions in which they were interested, of securities the value of which is questioned. Aside from the injunction to restrain construction work on the mausoleum, the petitioners ask for an injunction to prevent further selling of the company securities. The suit follows that of

the Rosehill Company as a corporation against the present complainants, asking the court to determine whether or not the company has a right to construct a mausoleum. The stockholders named are threatening to appeal to the courts to prevent the erection of the structure on the grounds that such construction is outside of the corporate powers of the company. The *Chicago Tribune*, in commenting on the matter said: "Purchasers of crypts in the community mausoleum now under construction at Rosehill have watched with interest the charges of mismanagement by the minority stockholders against the managers of the company. Some have feared the permanence of the mausoleum project might be affected by the alleged manipulation of securities. The petition for a receiver for the cemetery company charged that the Community Mausoleum company was a holding company organized for the personal profit of the directors. The fact that the managers offered a discount of 10 per cent for cash to the purchasers of crypts last summer and fall and netted a considerable sum therefrom is believed by some of the crypt owners to be an indication that the funds were badly needed. The mausoleum is the only large one of its kind in the country. That doubts have been felt as to the success of the scheme is intimated in the remarks of Thomas Wallis, one of the directors before the Association of American Cemetery Superintendents. The remarks of Wallis are reported in the *Monumental News* as follows: 'We are building a community mausoleum at Rosehill. My personal opinion is that if Rosehill had to do it over again they would not start to build one.' Later on in the report of the convention a Mr. Laudes is quoted as having said: 'I would like to know what excuse there is for calling them community mausoleums. They should more properly be called promoters' mausoleums. Promoters are not communists. * * * They are individuals financially interested in a money-making scheme.'"

New Cemeteries and Improvements.

The East Greenville Cemetery Association, East Greenville, O., has been incorporated by Frank Shaub and others.

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City Park

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Lyons, Iowa
Waterbury, Conn.
Asbury Park, N. J.
Aurora, Ill.
Monroe, N. Y.
Akron, Ohio
Minneapolis, Minn.
Freeport, Ind.

Country Clubs

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Country Club
Country Club
Soangetaha Country Club
Tyrone Country Club
Highland Country Club
Williamsport Country Club
Country Club
Youngstown Country Club
Milwaukee Country Club
Columbia Country Club
Fox Hill Golf Club
Brookhaven Country Club
Midland Country Club
Inverness Country Club
Country Club of Northampton Co.
Shinnecock Golf Club
Outremont Golf Club
Indianapolis Country Club

Marseilles, Ill.
Logansport, Ind.
Hull, Que., Can.
Galesburg, Ill.
Tyrone, Pa.
Meriden, Conn.
Williamsport, Pa.
Jefferson City, Mo.
Youngstown, Ohio
Milwaukee, Wis.
Washington, D. C.
Stapleton, L. I. N. Y.
Atlanta, Ga.
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Requires very little attention. When operated by an electric motor the entire system is automatically controlled. Needs only oiling and cleaning.

Plant built especially to meet all your requirements. Insures an ample and never-failing supply of cool, clear, pure water in all parts of buildings and grounds, at an even pressure of 70 pounds, if you want it. Can be operated at minimum cost.

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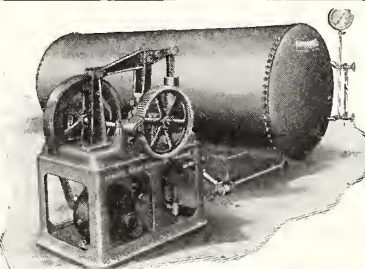
Kewanee, Ill.

One Of Many Endorsements

The Board of Directors of the Pythian home, Springfield, Ohio, which is supplied throughout by a Kewanee Water Supply System, write us as follows:

"We have now had the system in operation fourteen months, and thus far, its working has been absolutely perfect."

"Before installing the system we made a very careful investigation of the various systems and finally decided on yours. We have no reason to regret our action—on the contrary we might say that if it is possible to improve upon it, we are utterly unable to see in what particular it could be done."



Four hundred young shade trees, 500 rose bushes and 100 climbing vines have been planted in Fairlawn Cemetery, Oklahoma City, Okla. A recent improvement at the cemetery is an outdoor telephone system, which facilitates the giving of orders and general management of the grounds. Five stations have been installed, each with a gong signal. The Board of Directors has just appointed L. H. Bailey to act as supervising architect and it will be among his duties to pass on plans for mausoleums to be erected in the cemetery in the future. It is the aim of the board to refuse to permit any being built there except such as will enhance the beauty of the grounds. The cemetery now comprises 130 acres.

The Yates City Cemetery Improvement Association, Yates City, Ill., has been organized to buy the cemetery from the city. The county judge is made supervisor of cemetery properties by law, and Judge Rice is handling the necessary papers in the transaction.

Three acres have been added to the cemetery at Kirbyville, Tex.

Ridgelawn Cemetery, Elyria, O., has been deeded to the town.

The Hinsdale Cemetery Co., Hinsdale, Ill., has changed the name of the cemetery north of Hinsdale from Oak Forest to Bronswood.

A company has been organized to develop the new Highland Cemetery at South Bend, Ind., recently mentioned in these pages. The following is a list of its officers: President, Homer J. Miller; first vice-president, Dixon W. Place; second vice-president, Adam Wunsberger; treasurer, Clarence Sedgwick; secretary, Bruno Nehrling. The company is incorporated for \$100,000 and owns 115 acres of land. Of this, fifty-seven will be layed out this year on plans by O. C. Simonds, of Chicago. Bruno Nehrling was selected as superintendent. Mr. Nehrling is a graduate of the Missouri Botanical Garden and was until the time of his selection instructor in landscape gardening and floriculture and superintendent of grounds of the Illinois State Normal University. He is also secretary of the Horticultural Society of Central Illinois.

Evergreen Cemetery, Louisville, Ky., was dedicated May 24 with interesting formal exercises that included the following program: Invocation, Rev. Richard Wilkinson; "Come, Ye Disconsolate," St. Andrew's Male Quartet; dedication of the Evergreen Cemetery, Rt. Rev. Charles E. Woodcock, D. D., Bishop of Kentucky; prayer, Rev. William W. Landrum; unveiling of the Moose monument and address, Arthur H. Jones, member of Supreme Council of the Loyal Order of Moose of the World; "Tarry With Me, O My Saviour," St. Andrew's Male Quartet; benediction, Rev. William W. Landrum. The city office of the Evergreen Cemetery Co. is at 602 Louisville Trust

Bldg. The grounds are reached by the Okalona interurban cars.

Cypress Lawn Cemetery, San Francisco, Cal., the old cemetery in the heart of the city whose grounds have been closed to interments by a law forbidding burials in the city limits, announces the erection of a combined columbarium and mausoleum containing 10,000 niches for the interment of incinerated remains and 300 crypts for permanent overground vault burial. Prices of columbarium niches range from \$40 upwards; community vault niches, \$400 each. These prices include perpetual care, the perpetual care of this building being guaranteed by the perpetual care fund of the Cypress Lawn Cemetery Association, which now amounts to over \$400,000.

PENNSYLVANIA CEMETERY ASSOCIATION.

The next meeting of the Pennsylvania Cemetery Association will be held in Philadelphia, Tuesday, June 23, 1914, at the Hotel Adelphia.

The officers of the Association are Geo. M. Painter, of "Westminster," Philadelphia, President; Mr. Gunster, of "Oak Lawn," Wilkes-Barre, Vice-President; W. B. Jones, of "Highwood," Pittsburgh, Secretary; and the members of the Executive Committee are H. M. Barnes, of "Harrisburg," Harrisburg; G. W. German, of "Wildwood," Williamsport; W. H. Druckemiller, of "Pomfret Manor," Sunbury, and R. J. Miller, of "Glen Dyberry," Honesdale.

MORE OR LESS PERSONAL.

H. Wilson Ross, formerly superintendent of Newton Cemetery, Newton, Mass., and one of the best known members of the A. A. C. S., has moved to Worcester, Mass., and has severed his connection with Newton Cemetery. As a recognition of his faithful and efficient service, the Newton Cemetery Board presented Mr. Ross with an engraved testimonial, in a solid silver frame, bearing the following text:

"It was with genuine regret that we accepted, at a recent meeting, your resignation as superintendent of the Newton Cemetery, and we cannot permit you to sever your connection with us without having you understand how fully we appreciate the services which you have rendered. During the thirteen years that you have been our superintendent, you have grown constantly in our regard. The administrative ability which you have shown in conducting the business of the cemetery, as well as the frank, courteous and willing manner in which you have met us in and out of the meetings, and have carried out our directions, have made us realize your value as a superintendent and to esteem you as a friend. It is because of our cordial interest in your welfare, and the knowledge that we cannot offer you any inducement to remain with us, which would equal the advantages of the new position you are about to assume, that we have not attempted to dissuade you from making the change.

In order that we may still retain your personal interest in the cemetery and that we may continue our association with you as far as possible, we have at our last meeting unanimously elected you to our board of trustees, and it gives us much pleasure to learn that you will accept this office. You have our heartiest wishes for your prosperity and happiness, and we hope that you will always recall with pleasure the years which you spent with us as our superintendent."

The following officers have recently been elected by cemetery organizations:

Weatherford, Tex., Cemetery Association: Mrs. F. O. McKinsey, president; Mrs. R. A. Randall, secretary.

Leon Cemetery Association, Leon, Ia.: Dr. F. A. Bowman, president; Eva Rhea, secretary.

The cemetery lot owners of Venice, O.: C. R. Brown, president; Henry Brown, secretary and treasurer.

Evergreen Cemetery Association, Atlantic, Ia.: B. D. Forshay, president; J. D. Young, secretary.

Oakwood Cemetery Association, Fremont, O.: I. H. Burgoon, president; Clarence W. Cox, secretary.

Marseilles Cemetery Association, Marseilles, Ill.: A. L. Trager, president; Flo Boroughf, secretary.

The lot owners of Union Cemetery, Princeton, Ill.: H. A. Jackson, president; P. P. Michael, secretary-treasurer; A. M. Jackson was appointed superintendent.

Florence, S. C.: John Kuker, president; A. A. Cohen, secretary and treasurer.

The Blood's Point Cemetery Association, Flora, Ill.: Captain O. F. Lucas, president; W. D. Lambert, secretary.

ROSELAND PARK CEMETERY ENTRANCE.

The same spirit of progressiveness and civic pride manifested in the development of Detroit's manufacturing resources has been carried out in the modern improvement of her cemeteries. Situated at the northwest corner of Woodward avenue and the Twelve-Mile road, far removed from the factory district and city conditions, is Roseland Park Cemetery, one of Detroit's most beautiful burial parks. Possessing all the natural advantages in landscape features characteristic of a model "City of the Dead," man's art has been moderately employed to develop and conserve the natural beauty, rather than supplant any disadvantages in topographical effect of this exceptionally beautiful and rural tract of over one hundred acres. To add the "finishing touch" to all that nature has done to beautify Roseland Park Cemetery, massive iron entrance gates have in recent years been erected at the main entrance. An illustration of these gates, which were built and erected by the Stewart Iron Works Co., Cincinnati, O., from specifications by Architect Louis Kamper, are shown on the front cover of this issue.

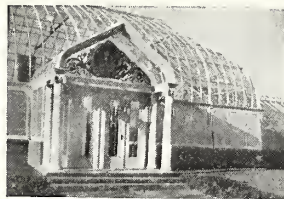
They are said by the manufacturers to be the largest gates ever erected to any cemetery in this country. There are four pairs of these gates, which form the front entrance to the cemetery. Each is 18 feet wide between piers and 22 feet high at hinge bars. Although of immense proportions, the artistic scroll work and ornamental wrought malleable picket tops form a relief to the extreme size of material, giving the gates a refined and ornamental appearance. They are hung to light Barre granite piers 6 feet square and 27 feet high.



HIGHLAND PARK GREENHOUSES, ROCHESTER, NEW YORK

They are called the Lamberton Memorial houses having been given to the city by Mrs. Mary Starbuck as an appreciation of her brother, Alexander B. Lamberton, who is president of the Board of Park Commissioners. In the vestibule gable there is a beautiful bronze medallion of Mr. Lamberton with a suitable description.

The group of three houses in front are used entirely for show houses and are always open to the public both day and night. Even as



Rochester has gained its merited name as The Flower City, equally has it won recognition for the unusual beauty and completeness of its greenhouse displays.

Great credit is due to the Superintendent of Parks, Mr. C. C. Laney, and his most able assistant, Mr. John Dunbar.

Will gladly send you other views and a complete description of the houses—all of which are Iron Frames.

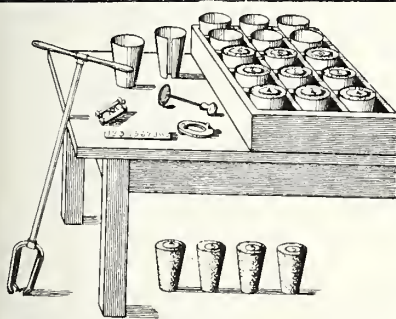
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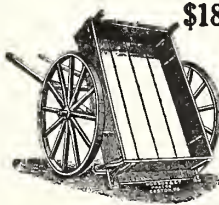
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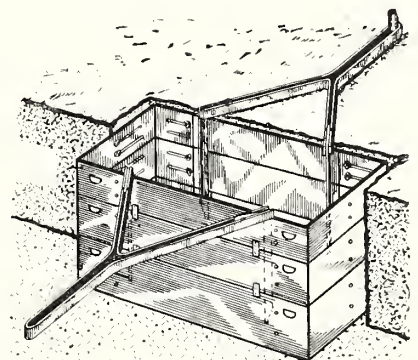
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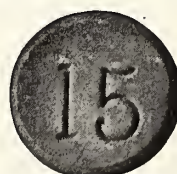
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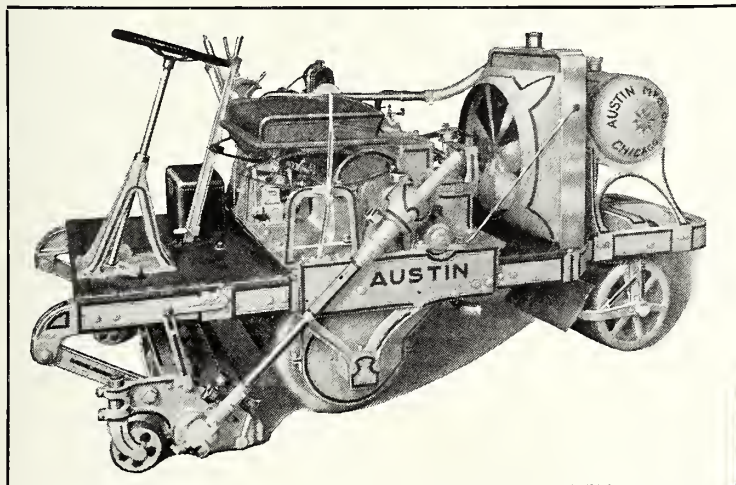
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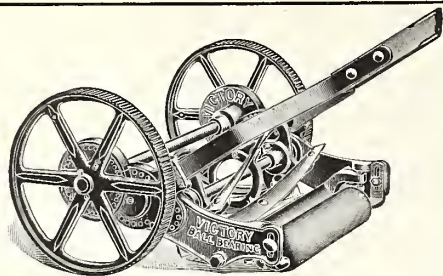
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HAND MOWERS AND HORSE MOWERS

This Lever Raises the Knives

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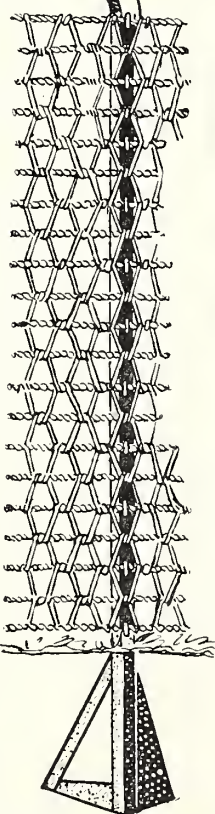


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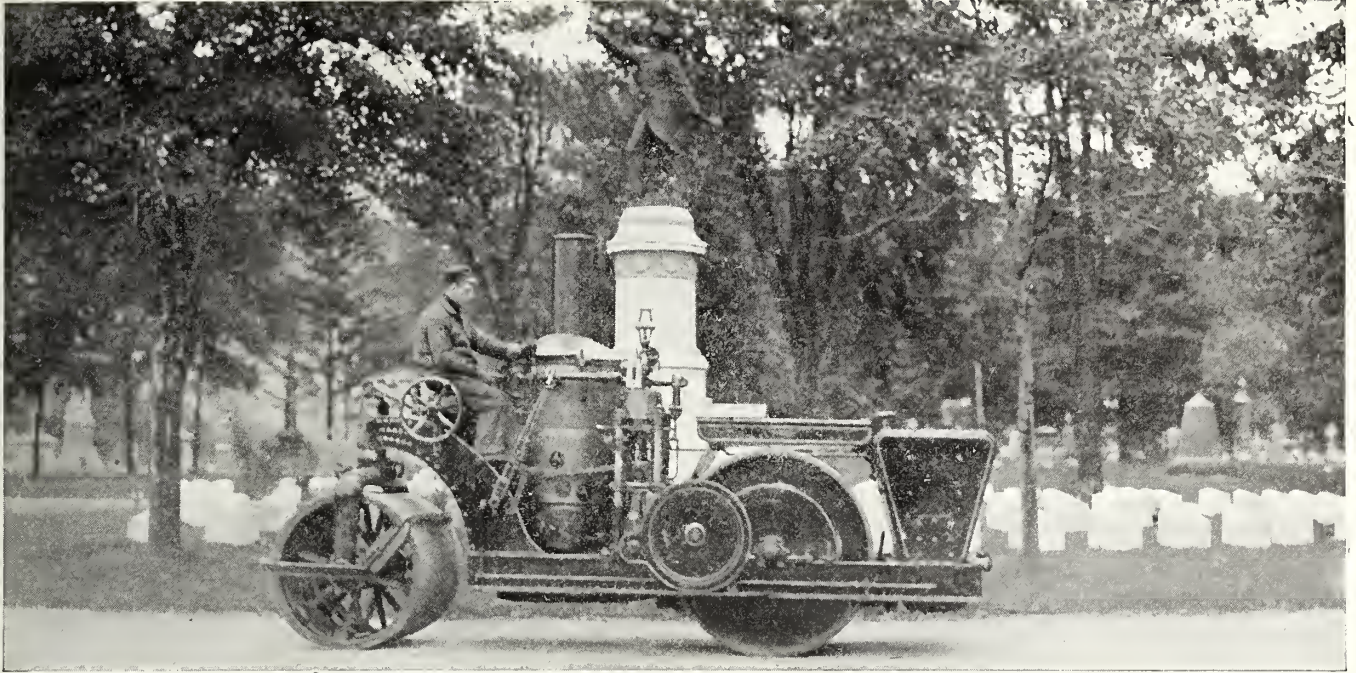
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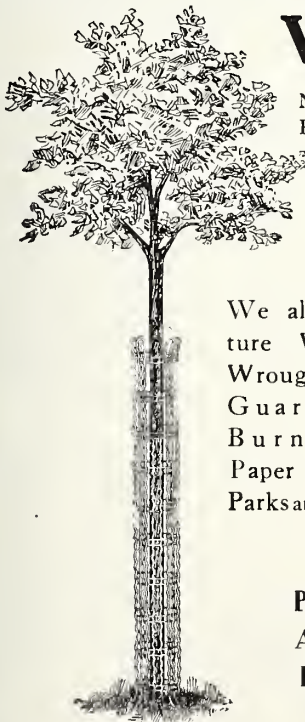
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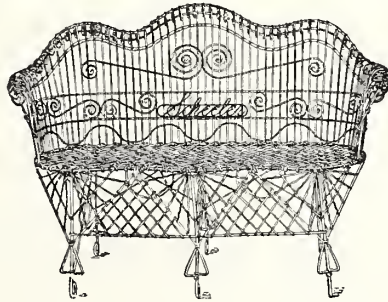
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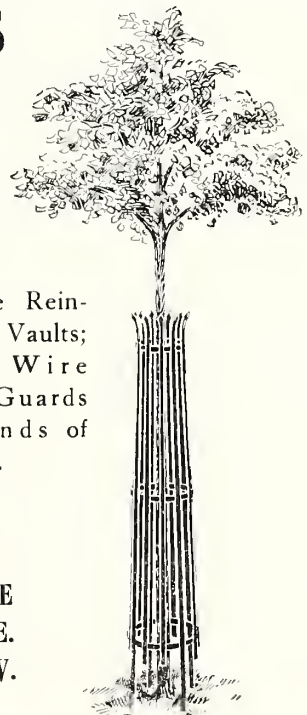


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Saves Girdled Trees, Heals Cuts and Wounds, Prevents Decay, Stops Bleeding in Pruning, Cures Fungus Growth.

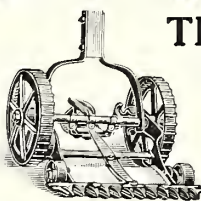
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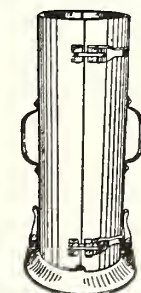


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will cut tall grass, short grass and weeds, and do all the trimming along the fence, walks and drives.

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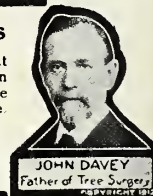
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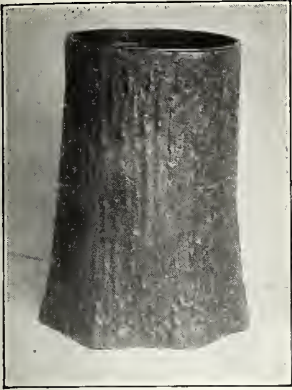


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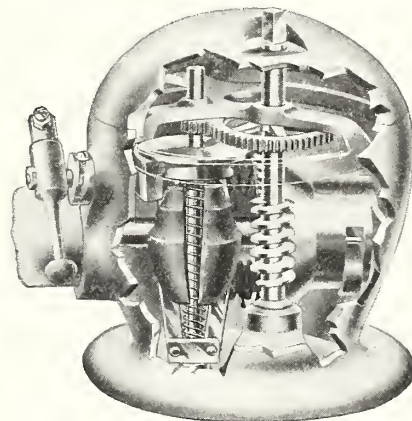
"Give Me a Little More Machinery and a Few Less Accidents."

That was the reply of President Haase of Forest Home Cemetery Company, Forest Park, Ill., to a criticism that the FRIGID device has too much machinery. And the peculiar part of the criticism is this—the manufacturer (of the old style friction device) that made the criticism, actually has more machined parts in his device than there is in the FRIGID Automatic.

But the FRIGID device is simple—so simple that any live, healthy boy of average mental attainment can understand it—so simple and easy to operate that a child can operate it.

Three parts control—a worm gear, a worm and a governor—and the greatest of these is the governor.

"SAFETY FIRST"



FRIGID Automatic Safety Control Lowering and Raising Device

President Haase further states—"We received our FRIGID Automatic Device the first day of November, 1913—since then till the present time (May 27th) we have used it continuously and we know it is the best device we have ever had—operating without a hitch and with perfect smoothness under all weather conditions, cold days, warm days and hot days. *The best of all is the feeling of perfect safety—for the FRIGID device is safe*"

After all your real concern with a lowering device you own is *safety*. Not merely safety in holding a heavy weight stationary on the webbing, any old lowering device can do that—but *safety* in lowering the casket into the grave.

Remember we give you "Safety First"—and we add to it beauty, simplicity and easy operation.

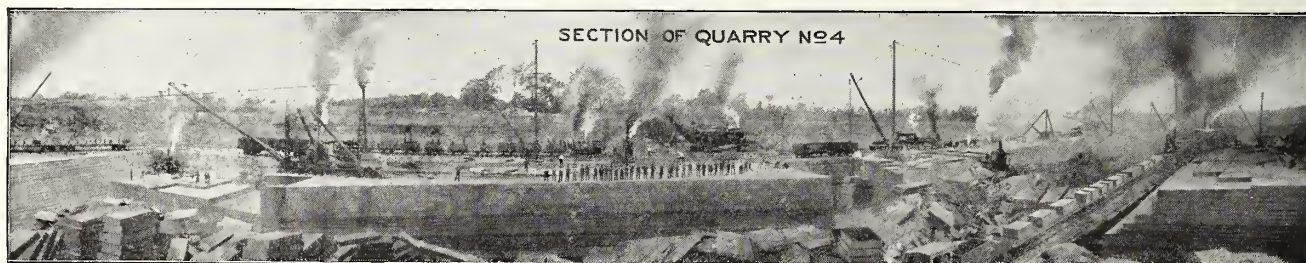
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A barrel of 50 gals. will make 2,500 gals. of liquid ready to apply to the roadway, covering 7,500 square yards of surface and costing **LESS THAN TWO CENTS A GALLON TO PUT ON**.

THE OLD METHOD OF HOING OUT WEEDS AND GRASS IS TOO COSTLY
TRY OUR WAY AND YOU WILL NEVER BE CONTENT WITH ANY OTHER

Fairmount Weed Killer ONLY Does the Work Right

SEND ORDERS TO SEEDSMEN OR DIRECT TO

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ONLY MAKERS

Southeast Cor. 11th & Master Sts. :: Philadelphia, Pennsylvania

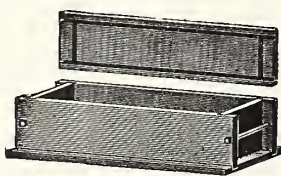
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STRUCTURAL SLATE OF ALL KINDS
Write us for quotations
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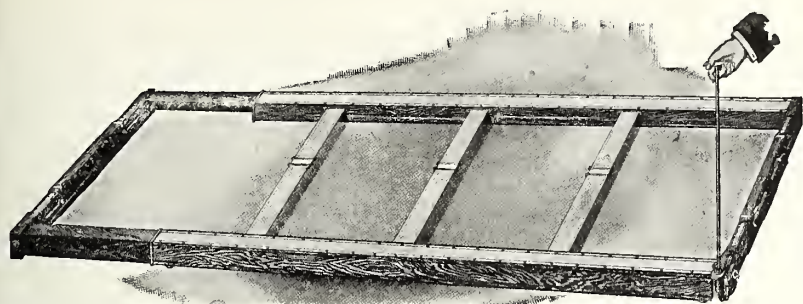
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1,000 CEMETERIES

are using our method for keeping their records of Burials. Location of Graves, etc. Descriptive Circular sent on request.
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Cut of Short and Quick Adjusting Device

Frame of beautiful golden oak. For all sizes and any weight required

National Devices Short and Quick Adjusting Chapel Devices

Full Telescopic Burial Equipments

Commendable Features of Both Wood and Metal Frame Devices

The operation of lowering the casket is under the absolute control of the operator. Any speed or checking the descent of the casket is at his will.

Telescopes to take infant caskets and up to ordinary steel vaults, and no sections inserted or taken out to obtain size desired. Has no intricate or sensitive machinery, but instead, simple and rigid.

Our Perfection Safety Brake is a simple, yet a positive control, fully controlling the load at the will of the operator who simply gives the lever a slight turn. It is non-corrosive; will not get out of order.

Webbing housed; not left exposed to storms or to dangle in the dirt, but held in place.

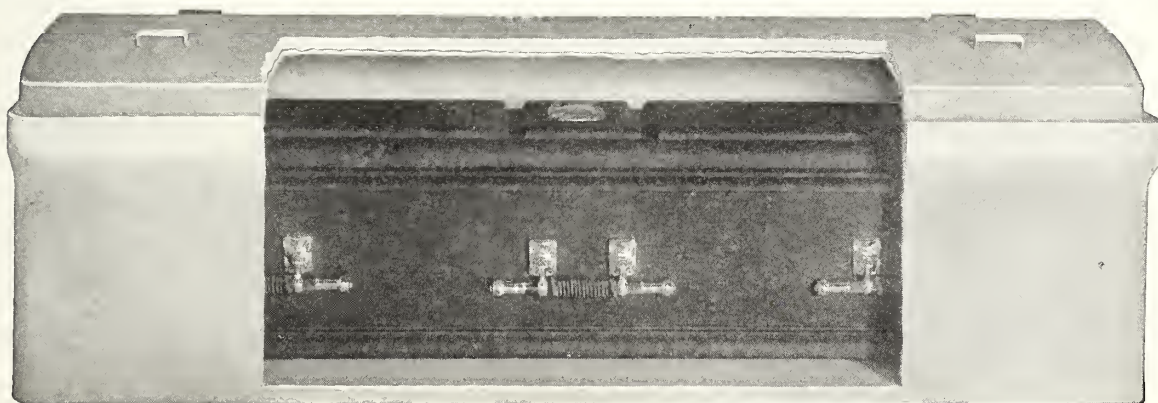
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The National Vault is made by water-proof process throughout with 24 gauge expanded metal, making it absolutely water, germ and ghoulish-proof, and will support any weight put upon it incidental to burial. An everlasting receptacle that can be removed from the ground at any future time without fear as to appearance or condition.

Visible seal which is absolute. The "National" is the only light weight cement vault that has stood the test of years of experience. Sells at a price within reach of all and gives a handsome profit.

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THE NORWALK VAULT CO.

The National Mold which produces the National Vault is made of 13 gauge steel and is substantially built; wet process used on walls and bottom of vault; no troweling being necessary. Anyone can operate under our instructions.

More National Molds and Vaults in use than all others combined.

Cemetery associations and superintendents—a chance to give the best at a large profit to yourselves.

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The Story of a Name

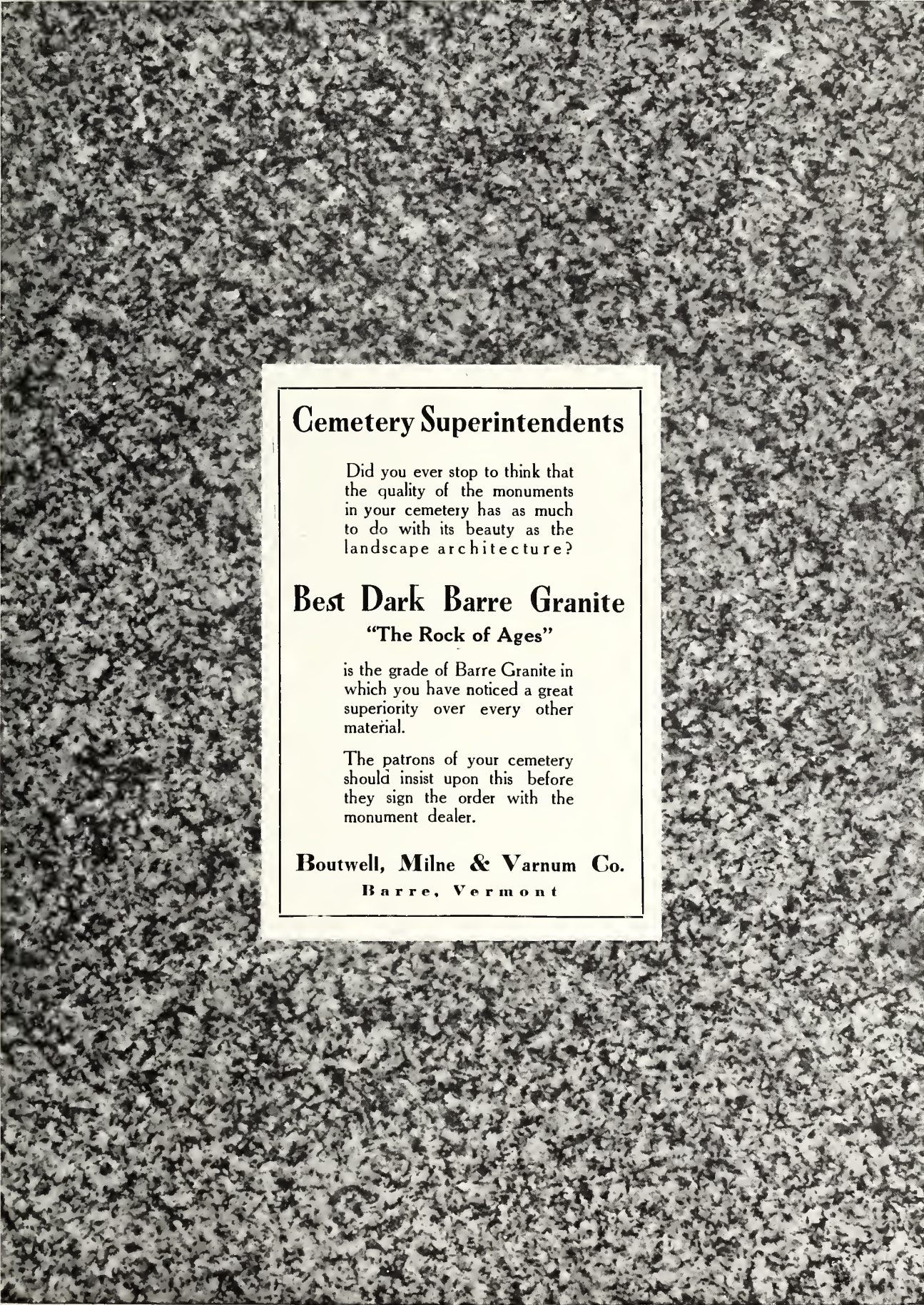
The old Military Road stretched from Crown Point, N. Y., to Charleston, N. H. That part of it which cut the Otter Creek river was known as Pitt's Ford. It was named after William Pitt, the British premier. Later, when a town sprang up there, the two words became one, and the village was called Pittsford. Still later, a product of the Vermont quarries—listed as Pittsford Valley marble—was pushed out over the world. In this strange way has the name of a great Englishman been wrought into the fabric of a great American industry.

The marble from the Pittsford Valley vein is known wherever monuments are bought. The cross illustrated on this page is one which was placed in St. Mary's cemetery by T. F. Johnson of Dover, N. J.

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Cemetery Superintendents

Did you ever stop to think that the quality of the monuments in your cemetery has as much to do with its beauty as the landscape architecture?

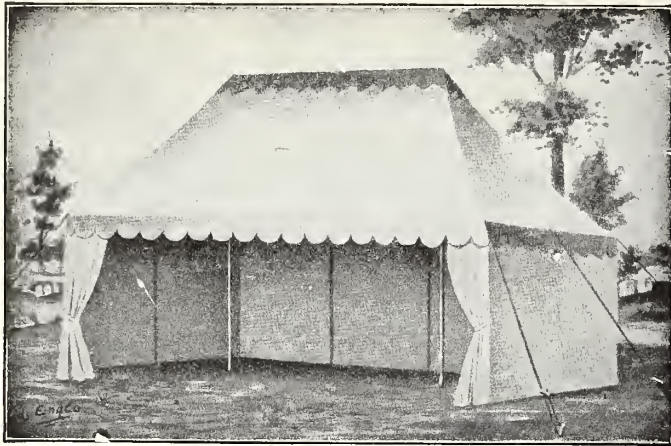
Best Dark Barre Granite

"The Rock of Ages"

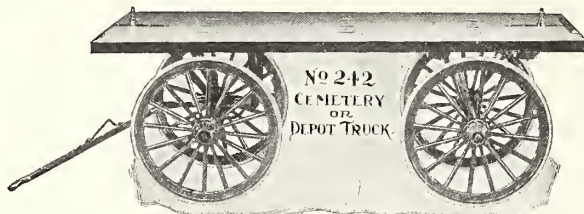
is the grade of Barre Granite in which you have noticed a great superiority over every other material.

The patrons of your cemetery should insist upon this before they sign the order with the monument dealer.

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Barre, Vermont



Durfee Grave Tents are made with detachable walls and provide protection against storm, wind or sun. We make 126 different sizes and qualities.



This carriage is a very useful and appropriate conveyance in cemeteries having suburban train service, also for conveying a body from hearse to train; has rubber tired wheels, and is finished in dark green with black trimmings.

DURFEE MANUFACTURING COMPANY, Grand Rapids, Mich.

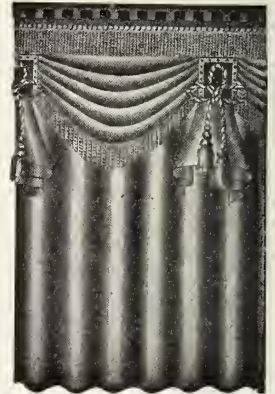
Is the health
and comfort
of your
citizens
worth
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?



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Durfee Grave Dirt Cover

Made in oval form, of green duck, 9 feet by 16 feet.

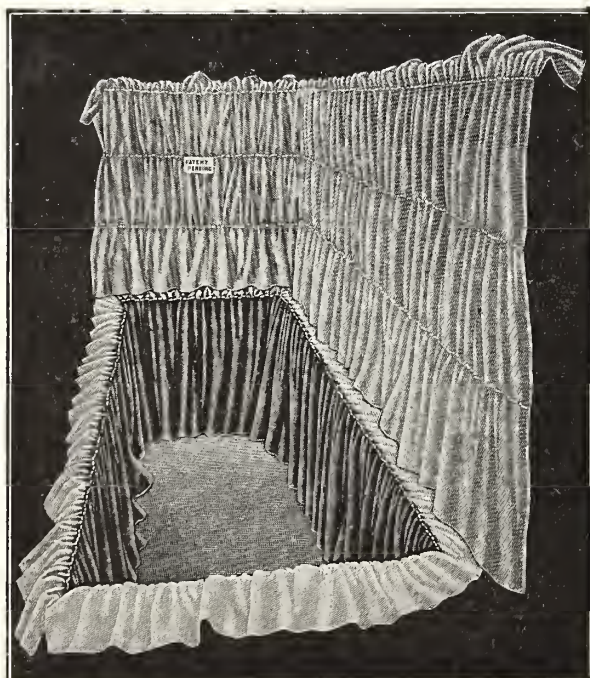


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Durfee Grave Lining

will fit any grave, is a handsome design and has been engraved at a large expense. Our circular shows four other patterns.

Write for detailed
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Grave Linings

colors and prices to suit everybody.

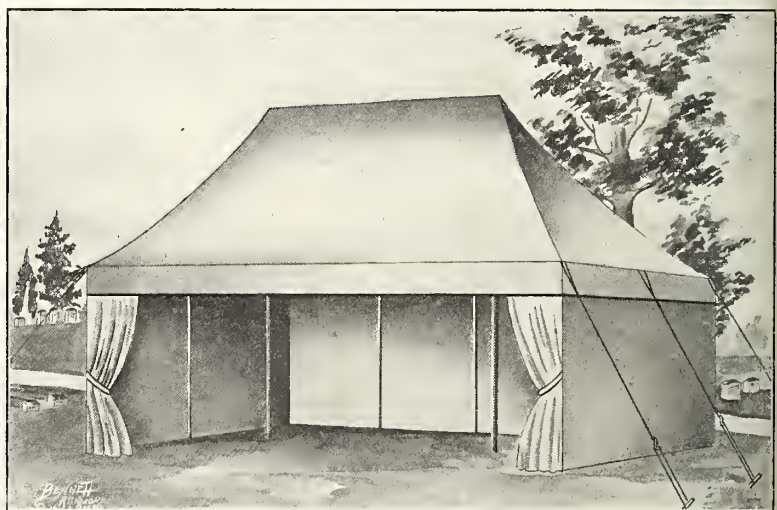
ground appearance of the ordinary tent.

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Our olive green duck dirt covers last four times as long as any oil cloth cover, and always look better.

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made to order. Our olive green tents blend with nature and take away the fair



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Lowering Devices, Cemetery Trucks, Casket Racks, and a Full Line of Undertakers Supplies

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MILTON, INDIANA

Park and Cemetery and Landscape Gardening

\$2 ^a Year | Canada \$2.25
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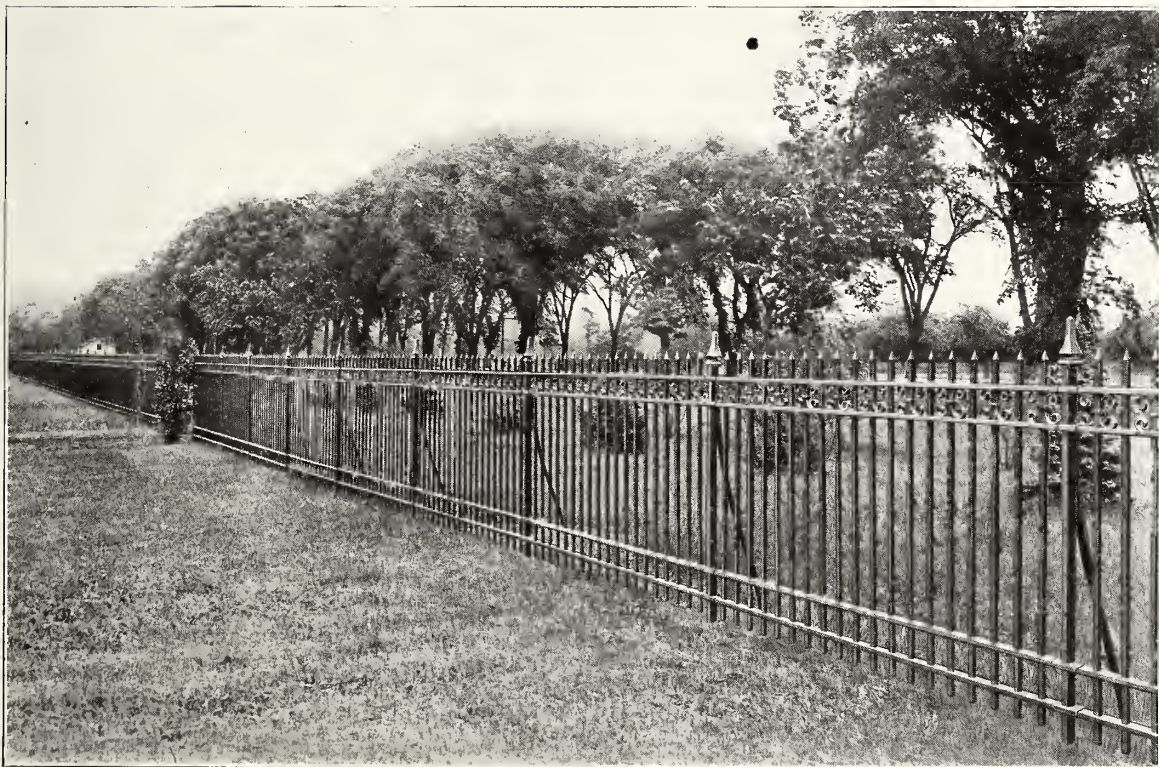
Published Monthly by Allied Arts
Publishing Co., 536 S. Clark St., Chicago

Vol. XXIV., No. 5

JULY, 1914

SMALL PARKS AND PLAYGROUNDS

Modern Playground and Recreation Service—Road Improvement and Maintenance
in Indianapolis—Summer Sports in the Parks—Types of Small Park and Playground
Plans—Summer Care of Shade Trees—Plan for City Square in Residence District—
Mineral Springs in an Oklahoma Park—Forest Home, Milwaukee's Modern Cemetery



6½ feet high.

ALBANY RURAL CEMETERY, ALBANY, N. Y. See page 168.
Built by The Stewart Iron Works Co., Cincinnati, O.

3,000 feet.

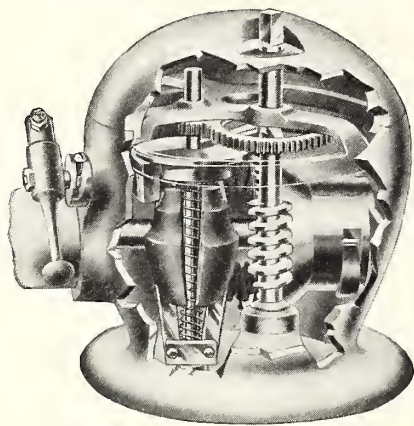
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Remember we give you "Safety First"—and we add to it beauty, simplicity and easy operation.

Write us.

FRIGID FLUID CO.
217 South Western Ave. Chicago, Ill.



Forest Hills Cemetery, Boston, Mass.

No Dust—No Weeds

Water sprinkling invites weed growth on drives where traffic is light.

To keep them clean, cool, dustless and free from weeds at least expense use

SOLVAY

Granulated Calcium Chloride

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MEETS EVERY REQUIREMENT"

Send for Illustrated Road Book

SEMET-SOLVAY CO.
SYRACUSE, N. Y.



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Save 50 Cents Per Cubic Yard Over Hand Work On Your Concrete Construction

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is superior to all other machines for building mausoleums, foundations for monuments, bridges, peristyles, drives, curbs, walks, etc. It pays for itself in a short time by its economy over hand work and the better quality of the mix is alone sufficient argument for its adoption.

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Early Investigation Will Be Profitable

WATERLOO CEMENT MACHINERY CORPORATION

221 VINTON STREET, WATERLOO, IOWA

Manufacturers Concrete Mixers and Contractors' Equipment

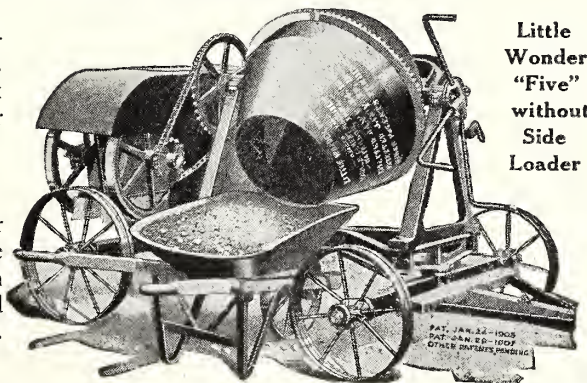
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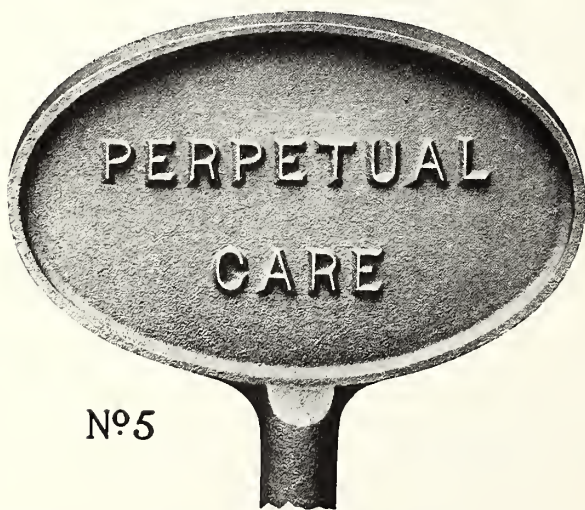
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EDITORIAL

JULY, 1914

VOL. XXIV No. 5

Suggestions For Model Cemetery Exhibit

Editor PARK AND CEMETERY: You have expressed the hope of seeing a model cemetery exhibition and this has set the writer to dreaming.

Our granite and marble manufacturers and producers spend considerable time and money making an exhibit of their wares at the annual convention of the Retail Monument Dealers. The florists, likewise, hold annual flower shows in the large cities. Our large cemeteries still have vacant and practically uncultivated ground in some places. Furthermore, there are some good designers engaged in the trade. To bring these people together, co-ordinating under the head of a landscape architect of recognized ability and authority, is perhaps a visionary scheme, but it might be done with profit to all. His services would cost considerable money. To get the monument men and the florists together at an advantageous season of the year is another problem. However, let us look ahead a little, assuming that these things can be done. At a mid-winter session of the dealers a grand competition and exhibition

of designs might be held, and in this connection it would be possible to get a number of our colleges of architecture to co-operate and submit designs in addition to those of the trade. A jury of artists, headed by the landscape architect, would pass upon the designs and accept all that had merit.

Among the designs selected, the wholesale manufacturers could certainly find much good material on which to exhibit their skill instead of getting up designs of their own, as they now do.

Having the designs apportioned among the manufacturers for execution, our landscape architect could then lay out his plans in co-operation with the florists.

Such an exhibition would necessarily have to be held in a large city in the center of a numerous population.

This is a sketch of the dream. If you think there is anything practical in it which might be taken hold of by a financial and all-around genius and realized, hunt him out.

St. Louis, Mo.

PERCY W. ROSEBROUGH.

Government Model Roads and Road Service

Arrangements are to be made by the United States Department of Agriculture, through Logan Waller Page, Director of the Office of Public Roads, to place on exhibition at the Panama-Pacific Exposition in 1915 the greatest collection of road models ever displayed in any parts of the world. The models will furnish exact duplicates of the old Roman roads, French roads, and all of the various types of modern roads, together with miniature models of road machinery operated by electricity. The Office of Public Roads made an exhibit of road models for the first time at the Alaska-Yukon-Pacific Exposition. The aim was to put on view such striking examples in miniature of road models that visitors would not only appreciate the beneficent effects of improved highways, but would, at the same time, be able to understand the methods of their construction. Since the Alaska-Yukon-Pacific Exposition closed, the exhibit has been displayed at Omaha, Neb., during the National Corn Exposition; at Knoxville, Tenn., during the Southern Appalachian Exposition; at Chicago, Ill., during the National Land and Irrigation Exposition; at New York City, during the Travel and Vacation Exposition and the Domestic Science

Exposition; at Atlantic City, N. J., during the American Road Congress; at Lethbridge, Alberta, during the International Dryland Congress; at Buenos Aires, Argentina, during the International Agricultural Exposition; at Turin, Italy, during the International Exposition, and at various other expositions and fairs. Since that time the collection has been greatly augmented, until every single type of road is now represented, and every known device used in the making of roads has been reproduced in miniature. The models have also been displayed on road trains at all important places along the route of the Pennsylvania Railroad in the state of Pennsylvania, the entire system of the Southern Railway, the Frisco Lines, the Atlantic Coast Line, and the Nashville, Chattanooga & St. Louis Railway. As a result of the instruction furnished by these road models, many farmers have joined forces to improve their own highways, and the road-building movement has had a great impetus. When application for expert advice concerning any special road problem is made to the Department, the Office of Public Roads furnishes it without exacting any fees.

Editorial Notes

Results from Western white pine plantations three seasons or more old show an average of 97 per cent success. On average white pine soil, planting can be conducted for from \$5 to \$5 per acre.

Forest botanists recognize only one cypress in the United States. Its range extends from Delaware southward around the coast into Texas and up the Mississippi valley to Illinois and Indiana. It is one of the few cone-bearing trees which drop their leaves in winter. The heartwood of cypress is noted for its decay-resistant properties.

The Chinese National Conservation Bureau is considering reforestation at the headquarters of the Yellow River. The government report shows that this will ameliorate the torrents and cause a more regular flow from the now denuded uplands. It is acknowledged, however, that this reforestation may not have an appreciable effect within the lifetime of the present generation.

In preparation for the coming fire season in California, 110 miles of fire lines have been built on the Sierra national forest.

A two-year-old plantation of Douglas fir on the Oregon national forest shows 94 per cent of the trees living. Extensive plantings of young trees in Washington and Oregon are costing only \$8 an acre. Direct seeding of lodgepole pine has been successful without exception on the Arapaho national forest, Colorado. Several of the areas sown two and three years ago show from 5,000 to 10,000 seedlings per acre.

The State of Pennsylvania celebrates two arbor days each year—one for spring planting and one for the fall—in April and October, respectively.

Nearly three million young trees are being set out this spring on the national forests of northern Idaho and Montana. On the St. Joe National Forest in Idaho three thousand acres will be planted.



THE HIGHLAND FLING; FOLK DANCING IN ST. LOUIS PLAY FESTIVAL.

MODERN PLAYGROUND AND RECREATION SERVICE

A new feature of recent playground work in St. Louis has been the giving of pageants. The two great occasions of the summer, in the opinion of the children, were Fourth of July and the day of the Annual Meet, the last Thursday of August.

In the Fourth of July celebration the Public Recreation Commission acted in co-operation with the Patriotic Independence Day Association, an organization of citizens formed to encourage the "safe and sane" observance of the national holiday. The celebration centered in four parks, Gravois Park on the extreme south; Soulard Place, south center; Columbus Square, north center; and Fairground on the extreme north. In each of these parks in conjunction with the features of the celebration supplied by the central and local citizens' organizations, the playgrounds gave a patriotic pageant called "America." It was simple in plan and execution. Before Columbia and the Thirteen Original States, passed in review, with appropriate dances, the various races and nations

which have made America: Indians, Columbus and the Spaniards, Puritans, George Washington and the Colonials, Hunters, Trappers and Voyageurs, and finally some of the more lately arrived peoples—Irish, German, Italian, Russian and so on. The details were many of them exceedingly crude, but as the entire celebration went with great enthusiasm and swing, although the temperature was 106 degrees at 2 o'clock and as it was almost the first occasion on which there was such hearty co-operation between city departments and widely differing private organizations, there was every reason for congratulation. The Artists' Guild planned the pageant and made water-color drawings of the costumes. Those of non-inflammable tissue paper were made largely by the children themselves, but materially assisted by the Mothers' clubs of the public schools and the guilds of some of the neighboring churches. The public school buildings were opened for the costume making, as were the rooms of the Jewish Alliance and the Souard Branch Library.

Turnverein directors helped supervise the athletic features of the program. In one district the School Patrons' Alliance had charge of the celebration, in another a Park Improvement Association, in still another a Business Men's Association. The Park Department furnished the grounds and the music, the Public Recreation Commission trained the children.

Superintendent George A. Parker, of the Hartford, Conn., park system in his last annual report offers a very keen and careful analysis of the fundamental principles of playground service from which we quote the following:

The city appropriated \$2,500 for outside recreation, and while some of the details might be classed as crude and open to adverse criticism, yet the results lead me to believe they have solved some of the fundamental principles underlying the recreation problems of city life. In that respect the playgrounds were successful. A man who works near a window in one of the high buildings overlooking the territory served by the playgrounds said that



LITTLE FOLKS' FESTIVAL, BUSHNELL PARK, HARTFORD, CONN.

the degrading and unmentionable things that took place in back yards before the playgrounds were established came to an end, for the children were drawn out of the back yard into the playground. The policeman on the beat said that the question of what to do with the children in the streets, and the danger from their playing there, was practically ended, for the children leave the streets for the playground. A mother who seemed representative of others said that she felt safe about her children, for she knew where they were, out of the streets, away from the evil of the back yards and in the playgrounds. Therefore, from the mother's and policeman's viewpoint they were successful, and for the evil of the back yards they became an efficient remedy.

It is customary in discussing playgrounds or play opportunities to consider them as a center of a circle of influences of varying diameters, such as, a playground for small children has a radius of influence of one thousand feet; one for larger children of two thousand feet; and a baseball field of a mile, but it seems to me a clearer conception of their influence can be gained by considering a city as a great maelstrom of human life, with placid even currents in some parts, and strong rapids in others, and innumerable eddies and whirlpools caused by the conflicting and contrary directions of the different currents. In this maelstrom child life and weaklings are too often caught and held helpless in the eddies and whirlpools. The extent of the influences of the playground depends upon the extent and vigor of the eddy it serves and cannot be measured by any geometrical form, for public playgrounds are needed most in the eddies of city life and not so much for the homes of those located in the even, placid stream of life.

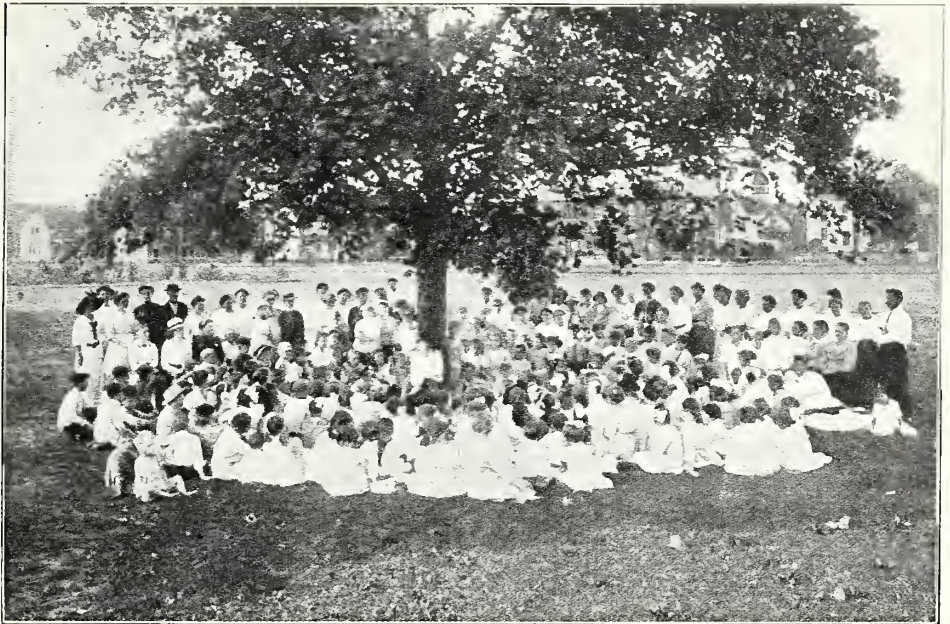
I believe in "free play," and consider "directed play" a contradiction of terms. The word "play" in the latter is used with an abnormal meaning. I know I stand alone in my advocacy of "free play," therefore, I have no right to discuss it in a public report. I refer to it only because it shows my viewpoint of recreation, and perhaps may influence my conclusion, even though I intend to make no statements which are not equally true with "directed play."

Recreation is that part of leisure time which is used by the individual or the community in nature's own way; for development between the ages of birth and fourteen; for construction between fourteen and twenty-one; for formation between twenty-one and twenty-eight; and for the maintenance and renewal of the elasticity of life afterwards, which monotonous work or business tends to destroy.

If I am right in my definition, then recreation is a matter which concerns all

ages and conditions and not limited to children, as it seems to be considered by many.

Recreation in cities is a new problem. Heretofore, men and women were made under country influences, and afterwards lived in the city. The reverse of this fact is fast coming true. Up to the present time the city has not been able to produce fully developed men and women from boys and girls born in the city of parents who were born and lived continuously in the city. Rare indeed has been the exception



STORY HOUR AT FAIRGROUND PARK, ST. LOUIS.

to this rule. The time must come, and I believe soon will come, when cities will produce stronger and better men and women than the country ever did. When it does so, the recreation problem of cities will have been solved, for recreation is the road to this end. Recreation, then, is a constructive force of the first magnitude in city building equal to and co-ordinate with the other two great constructive forces, work and education.

The city's relations to these three forces differ widely. With work, the city sees to it that each man receives the reward for his efforts that is agreed upon, but leaves each, either as an individual or in combination, to make his own agreements.

With education, the city sees to it that the young shall be properly trained and prepared for life. The city provides the means and compels attendance. The child has to go whether he will or no.

With recreation, the city only provides the opportunity, and leaves it at the option of the individual, or the group, whether they use it or not.

With these preliminary explanations, I will now state what seems to me some of the more important laws governing recreation as related to cities:

1. If the opportunities for recreation are provided to meet the needs of the people, they will be used up to the full extent of the people's need.

2. The variety and amount of recreation facilities needed is quite constant with each group of people living under similar conditions, and varies but little in groups of ten thousand.

3. The recreation desired by any condition or class of people will be supplementary and complementary to their daily work and education, and while varying much as to groups, is quite constant within each group.

4. If play facilities are provided too abundantly or not sufficient to meet the people's needs, the group as a whole is weakened. There is proportion or balance between their needs and the means

of satisfying them that will give the greatest strength and the best results.

5. If any particular kind of recreation is provided in too great abundance, it will become state and little used. If not enough, it will cause discord.

6. As a machine out of balance causes friction, unnecessary wear and cost to run, and in the end may destroy itself, so play facilities out of balance cause trouble, are costly, and the facilities provided are often destroyed. Generally, when there is discord or destruction in recreation or park work, it is because they are out of balance, and the cause and remedy lie with the superintendent rather than with those in attendance.

7. Every muscle, organ, function or attribute of the human being needs relaxation and recreation, and for each of these needs there are conditions or appliances to satisfy them. It is for the city to know and provide the opportunity.

8. In the country each home provides its own water supply, sanitary conditions and recreation. Whether good or bad the individual was responsible, but in the city the individual cannot provide those things separately. It is a community interest, and the community as a whole is responsible whether they be good or bad, and it is responsible for recreation the same as it is for water, sewerage, and the streets.

While there are many and varied local difficulties and perplexities in recreation work, I have found none which did not seem to rest upon one or more of these general principles.

I assume it is within the province of the Park Department as custodian of the park areas and therefore of much of the recreation opportunities, as they are now

understood, to be interested in what is adding materially to the cost of recreation, and apparently will add much more in the future. I refer to the six tenement blocks, and those blocks of a greater number of tenements. They occupy such a large percentage of their building lot that there is no opportunity for recreation outdoors on their own territory for those who live within them. Every block so erected means additional cost to the city for recreation, to be paid for in part by taxes upon the buildings themselves, and in part also by taxes upon homes which do provide recreation for their own. As bad as this is, worst seems to be coming, for tenements of this character are now being built in the interior of our city blocks with blind alleys and courts, a condition most severely condemned in other cities, which is being remedied at great cost in some, and which promises to become an unnecessary evil and expense to Hartford's next generation, which is the point of this discussion. It will increase materially the per capita cost of recreation in Hartford.

To remedy this would require a city ordinance preventing any dwelling houses from being built that do not front upon a public street. I believe that such an ordinance would be passed if the city as a whole realized the evil that is creeping in upon it.

The experience of this year seems to lead up to the following suggestions:

1. That in addition to such playgrounds as may be located in the parks, other playgrounds be equipped and maintained outside of the park areas wherever there is a group of children who would use them.

2. That playground apparatus be made in such form as to be as easily moved in and out of a playground as furniture is moved in and out of a house.

3. That play apparatus be frequently changed, for it is demonstrated that the same child tires of using the same apparatus longer than a week or ten days, although he may return to it with renewed vigor afterwards. The reason for this is on account of his physical make-up and not simply a vagary of his mind.

4. That outside play apparatus may be located on private grounds at the option of the owner, to be removed at one day's notice when desired without question.

It is assumed that the park interests in its play apparatus follows its moving from place to place, and that it is never lost any more than if it remained on its own territory.

5. That all playgrounds and play apparatus be cleaned and put in order daily, for it was found when this was done, the people respected and used it properly, but if the park neglected its care, the people sometimes misuse or destroy it.

6. That the department be prepared to install additional play apparatus in existing playgrounds as they may be needed, or to install new playgrounds at any time. By so doing scrapping or misuse of playgrounds and apparatus can be almost entirely prevented.

7. Pavilions large enough to accommodate 2,500 people are needed in Colt and Pope Parks, and until provided, those parks must remain limited in their service to the city. The need of them is great, much greater than one realizes unless they have given a most careful study to the recreation needs of a city.

The Park Department through its decorative and recreational functions should become as closely connected with each home as is the Street Department and the Water Department, and as interested in the welfare of the people as is the Health Department. As great service as the Street, Water and Health Departments render to a city, the Park Department should supplement that service, becoming in its own way as important, and when that comes about the Park Department will become self-supporting.

SUMMER SPORTS IN MINNEAPOLIS PARKS

In natural facilities for summer sports, in systematic development of the advantages afforded by its unique chain of small lakes and the Mississippi river, the park system of Minneapolis is unrivalled. Its water sports and water carnivals are unique, and have made its lakes and its parks of the widest service to a vast number of its citizens, young and old.

There is water baseball, canoeing, swim-

ming, diving, boating and bathing that get the utmost value of the water features of this remarkable park system.

The latest annual report of the Minneapolis Park system, a beautiful illustrated book of 135 pages, tells of some substantial development in the summer attractions and lake system.

Especially notable are: The linking of Lake of the Isles and Cedar Lake; the

work upon Cedar Lake Boulevard; the extension of Glenwood-Camden Parkway to Nineteenth Avenue North; and, finally, the securing on so large a scale, the last link in the "Grand Rounds," thus completing, one of the most attractive and extensive drives to be found in this country. This gives forty miles of boulevard practically all in the city, leading by nearly a dozen natural lakes, several of which are large



WATER BASEBALL ON LAKE HARRIET, MINNEAPOLIS PARK SYSTEM.



WATER CARNIVAL AT CALHOUN BATHS AND GROUP OF LIFE SAVERS, CALHOUN PARK, MINNEAPOLIS.

enough to afford the delights of yachting in summer and the invigorating pleasure of ice boating in winter; leading by river gorge with superb vistas of ever changing beauty; by picturesque and famous water-falls; by stream and meadow, over hill and dale and through wooded groves. Nature was prodigal indeed with her gifts where this city lies. By taking advantage of these early and each year continuing to improve them, Minneapolis is developing one of the most remarkable park systems in the country.

At the Lake of the Isles Park the canoe and boat landings had to be enlarged, and altogether 475 licenses for private canoes, 21 row-boats, and 4 power boats, were is-

sued during the year. Several regattas were held during the season and proved a great attraction.

The Calhoun Baths have been well patronized and upon several occasions beyond their capacity. Through the enforcement of a one-hour time limit on very hot days, it has, however, been possible to accommodate the largest crowds without much delay. People were, only occasionally, obliged to wait longer than thirty minutes for accommodations. A very large number used the beach only, as they came in automobiles dressed ready for bathing. Three diving platforms and one tower 14 feet high were constructed. The total attendance during the season, exclusive of the

many thousands who used the beach without entering the bath house, was 190,319.

The canoe and boat landings for the accommodation of private crafts were found to be inadequate and were enlarged. There were 308 canoes, 35 row boats, 21 sail boats and 22 power boats on this lake.

At Lake Harriet the canoe platforms again had to be enlarged and it seems as if the limit of such extension along the west shore has been reached. The total number of licenses issued to private owners of boats and canoes is as follows: 696 canoes, 33 row-boats. The Board had in service 104 canoes, 159 row-boats and the gasoline launch "Harriet," which made the total fleet of water craft on this lake 992.

PLANNING A CITY SQUARE IN RESIDENCE DISTRICT

The problem involved in the improvement of Lyons Park in Mobile, Ala., was the designing of a city square in the residence district, that might be fully developed as a recreation center, while retaining the Park features so as to afford pleasure to people of all ages.

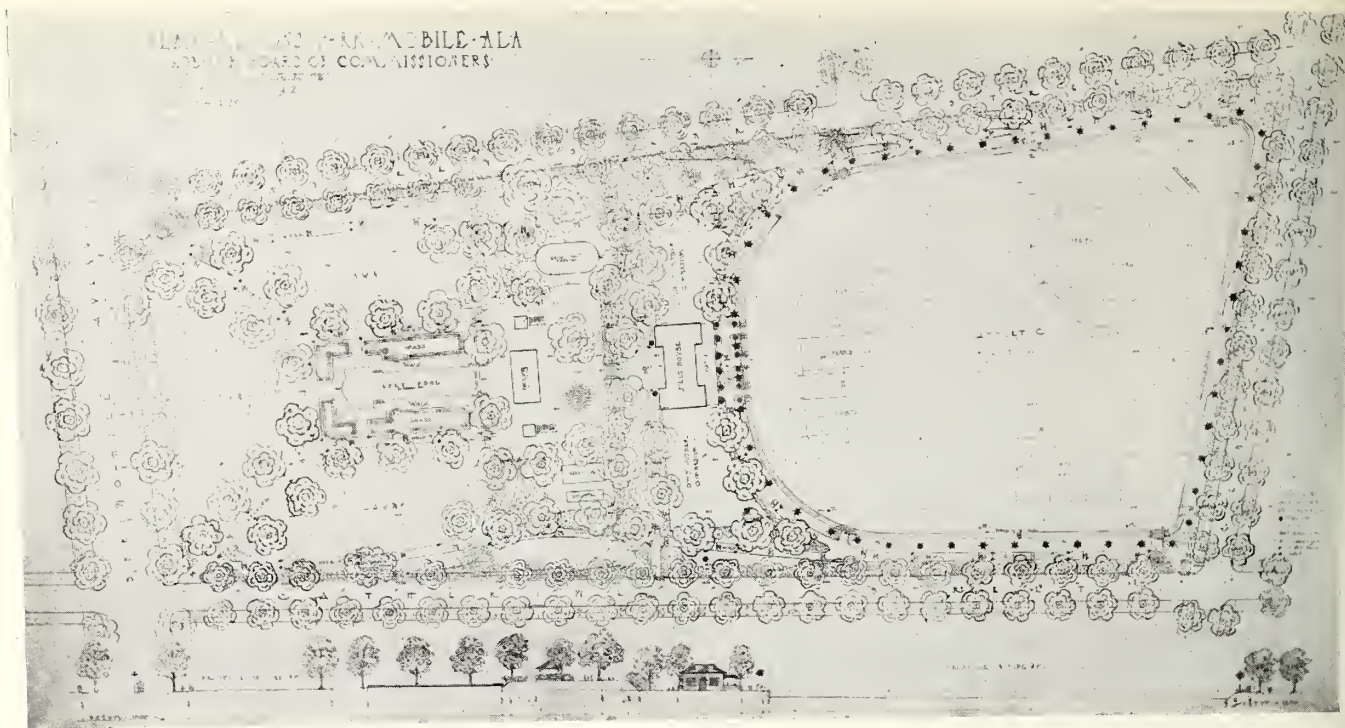
Owing to the existing conditions which make a natural and desirable division in the property, it is planned to utilize the southern portion as a small park; the central portion with its higher elevation and existing shade to be given over to the use of the small children; and the northern portion as a general playground.

Referring to the portion to be developed as a small park, the landscape architects, Cooke & Swope, of Atlanta, considered

that a semi-formal style of treatment would be most appropriate, and show entrances to the grounds from each of the front corners with walks leading to the central part of the grounds. There are also marginal walks leading through the park and on towards the playgrounds, these walks taking the place of the street sidewalks abutting on the park, as the sidewalk strips have been included in the park area. These walks are laid mostly in the shade of the trees as shown, which are to be in most instances live oaks; and park benches will be located at regular distances on each side of the walks.

The predominating features here are a concrete lily pool with a low headwall and wall fountain, and a pavilion which ter-

minates the view on the central axis from the street. In the lily pool might be grown the different pond lilies and pink lotus lilies (*Nelumbium speciosum*), which are tall growing and large enough to be seen from the street. These lilies should be grown in submerged tubs so as to facilitate the cleaning of the pond and to control their growth. When lilies are grown in this way a few goldfish in the pond have access to all parts and easily prevent the breeding of mosquitoes. The area lying immediately around the lily pool is laid out with straight walks and formal plots, these latter to be mainly maintained in turf, and to be bordered with narrow beds of herbaceous perennials and formal shaped low growing coniferous evergreens such as



Blobose Arbor-vitae (*Thuja globosa*), Japanese Yew (*Cephalotaxus pedunculata*), etc. Each corner of the lower portion of the pool is to be emphasized by a specimen plant of larger growth to be sheared into a formal shape, known as standard. The native Carolina Cherry or Mock Orange (*Cerasus Caroliniana*) is readily trained into this shape, and would be a very appropriate plant for the situation.

It is proposed to enclose the whole area by a substantial iron fence of a simple design and a low brick wall. This wall will also serve to retain the soil on the inside which will have to be of a higher level than the grade of the side streets, it being necessary to retain the grade of the ground surface at this higher elevation in order to protect some fine existing trees.

Leaving this portion of the grounds by means of three flights of steps we come to that section of the park that is to be de-

voted principally to the use of the smaller children and their attendants. Here is located the pavilion, an open structure affording shade and protection from the weather; and also two small gabled roofed shelters covering sanitary drinking fountains. These structures make attractive terminations to the two walks leading from the park area. In the shade of the existing live oaks will be placed swings, benches, etc., and locations are also shown for a wading pool and sand courts. Sand courts are to be provided with canvas screens on iron frames to afford shade until the young trees will provide the

The rest of the park, which is reached by means of a descending flight of steps, will be devoted to recreation purposes. Here will be located the Field House, which will contain a Director's Office, assembly room, locker room, bathing and toilet facilities, etc. A wide cross walk

affords easy access to this building direct from the side streets without necessitating coming through the park. To the east and west of these buildings are located the girls' and boys' outdoor gymnasias, which are inclosed by substantial wire fences, and which will contain the usual equipment. This will be treated more fully in a later report. The north side of the Field House is provided with a veranda of ample width, affording an excellent view of the playfield, in which are situated the tennis courts, baseball diamond, all of regulation size, and basket ball court. This playfield, which is sunk three feet below the adjoining territory, has ample room for two additional tennis courts, a hundred yard straight away running tract, this last feature to be located across the lower end of the field and paralleling Center street, and for other smaller games not shown on the plan.

Shrubby plantings are shown around the margins of the grounds, in the angles of the paths, on the slope of the terrace on the south side of the path leading by the rear of the Field House, and also around the base of this building. The shrubs forming these groups should be particularly well adapted to the climate of Mobile, and should be grouped in masses and allowed to take their natural shape and blend together. This does not include the specimens already mentioned for the plots near the lily pool, nor the formal plants shown at the steps in front and rear of Field House. The only other planting proposed is the shade trees which will consist mainly of live oaks and the Sabal palmettos shown surrounding the athletic field on top of the terrace. The Southern Magnolia (*Magnolia grandiflora*) could be substituted for the palms if preferred.



LILY POOL, LYONS PARK, MOBILE, ALA.
Cooke & Swope, Landscape Archts.

SUMMER CARE OF SHADE TREES

By Wm. W. Colton, in Bulletin of Massachusetts Tree Wardens' and Foresters' Association.

Summer is the ideal time for the practice of what is known as "tree surgery." Under the title of tree surgery we include the operations of removing dead and superfluous wood, bracing defective branches, the care of minor injuries and the treatment of cavities. Besides the work that would come under the above headings, it is sometimes necessary to prune a tree so as to shape it for a particular location. Other important features of the work that should be done at this time are the removal of old tree guards that the tree has outgrown; the placing of new guards, and the removal of portions of the sidewalk and curb where they are interfering with the growth of the tree; the treatment of the soil where it is necessary; underdrainage; watering and caring for the general health of the tree.

From July to September, a tree bleeds less than at any other time (except in the winter, of course), therefore these months are the best time to do your pruning in. It is easier also to shape a tree in the summer as the dead branches are more conspicuous when the leaves are on and can therefore be more readily removed.

In removing superfluous wood it is often necessary, especially in maple, basswood, and other dense grown trees to remove some of the interior branches because the foliage on these trees often develops beyond the power of the roots to supply it with water, especially in long, dry summers. As a rule, however, it is best not to remove a live limb unless it interferes with a better one, or for some other good

and sufficient reason such as interference with traffic, etc.

Too heavy a pruning must not be made in a tree during hot weather as the shade afforded by the leaves is necessary to prevent sun scorching.

In pruning the tree, care must be taken to make the cuts as close to the trunk as possible and to see that the resulting wound is painted with a good coat of tar, shellac or a heavy lead paint. Care must also be exercised when removing a large branch that two cuts be made so that the branch when falling will not tear the bark from the trunk of the tree. When a large number of branches are to be removed, it is better to remove one each year rather than to take them all out at once. In cutting back the top of the tree or the ends of the branches the cuts should be made just above a small branch or bud as this will draw the sap to the wound and help to heal it over quickly.

After properly trimming the trees, attention should next be given to the proper treatment of wounds and cavities.

Wounds made by horses gnawing through the bark or by abrasion from traffic can best be treated by cutting away all decayed material, and treating the wound with a good coat of tar or other substance to keep air and moisture away from the wound.

In treating your cavities it is well to remove as much of the dead wood as the location of the cavity and the condition of the tree seems to warrant, and also to expose a smooth surface of sound wood at all points. Next you sterilize the inner

surface well with an application of creosote and then apply a coat of tar. If the cavity is now in such a shape as to retain water or is so large that the tree is weakened thereby, it should be filled with cement. If the cavity does not fall in either of the above classes, it is best to cover with tin or zinc or to paint with a sufficiently heavy coat of tar and allow the wood to gradually cover the wound without the use of any filler.

There are many insects appearing on shade trees during the summer which need attention, such as the gypsy and brown-tail moth, the elm-leaf beetle, tussock moth, tent caterpillar, leopard moth, spiny elm caterpillar, green maple worm, larvae of various flies, various saw flies, various tree lice, and scale insects. Practically every one of our shade trees also are attacked by borers which may be treated during the summer months when the larvae are working in the trees. Most of the insects above mentioned can be controlled by spraying. For scale and lice, a contact poison such as lime sulphur or one of the soluble oils should be used in a mild form. For the leaf eating insects, as the elm-leaf beetle, brown-tail and gypsy, tussock moth, etc., a stomach poison such as arsenate of lead used in various strengths is the best remedy. A spraying calendar which will give the quantities of the different kinds of poison to use and the time to use them for the different insects can be obtained from the Experiment Station at Amherst and from most of the companies selling poisons and spraying outfits.

PARKWAY CARE and MAINTENANCE in INDIANAPOLIS

The work of road maintenance and repair in the Indianapolis park system last season was unusually heavy owing to the ravages of the high water during the month of March. The parkways were filled with drift and sand and the tennis courts, golf courses and general play-

grounds were greatly damaged. The nursery which is within the flood area suffered very much, a large force being necessary to restore it to the normal condition.

The roadways being largely constructed of gravel are sources of constant mainte-

nance. The road drag, wheel grader and steam roller have been used to advantage in caring for the surface, crown, and grade. An asphaltic oil of 26-28 specific gravity has been used as a dust preventive. The light oil has given excellent satisfaction throughout the year on both gravel



WEST RIVERSIDE DRIVE, INDIANAPOLIS, DURING CONSTRUCTION.



WEST RIVERSIDE DRIVE, INDIANAPOLIS, COMPLETED.

and macadam pavements, and it is reported that the disagreeable conditions attending the application of heavy oil have been eliminated.

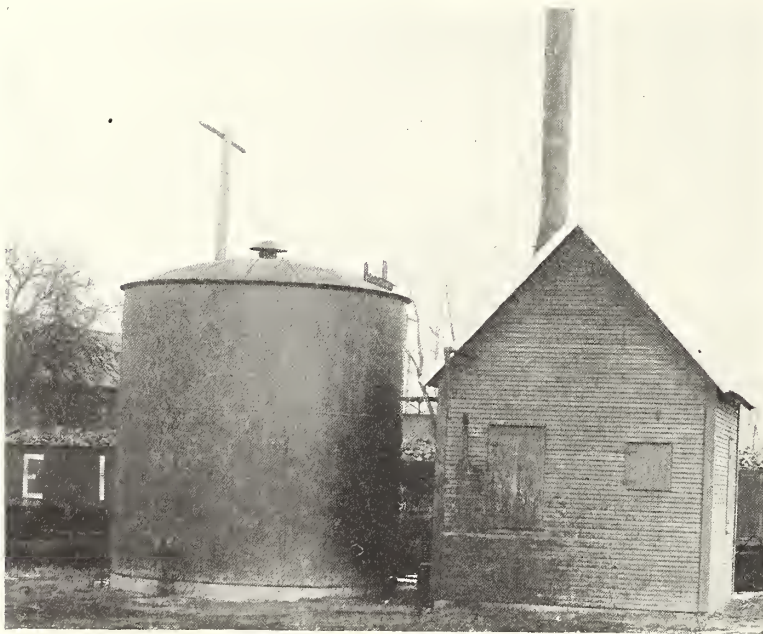
Calcium chloride was used again on the roadways at Garfield Park.

Jas. H. Lowry, Executive Officer of the Park system recommends the use of the light oils on all roadways.

The maintenance in small parks and on street centers consists of caring for lawns, shrubbery, flowers and walks. It is suggested that this phase of the work could logically be placed directly under the supervision of the horticultural department. This plan if adopted would relieve the executive from a portion of the maintenance and permit more attention to be given to the more important problems of maintenance in the larger parks and parkways.

West Riverside Drive, four thousand eight hundred feet in length, was constructed during 1912 and 1913. The roadway is thirty feet in width, with a thirty-five foot lawn on the west side and a fifteen foot lawn on the east or park side between Thirtieth Street and Crooked Creek. Beyond Crooked Creek for about one thousand feet, the lawns are twenty-five feet wide on each side, and for the remainder of the distance they are the same as the first section. The roadway is constructed of Asphaltic Macadam under the standard specifications of the Park Department and after several months' service it is still apparently satisfactory. A section of concrete roadway one hundred and seventy-five feet in length was constructed as an experiment. It is the first piece of concrete road in Indianapolis. The specifications of the Universal Portland Cement Company for one-course pavement were used. Reinforcement of wire mesh and metal expansion joints were used. At present the pavement is in excellent condition. A few surface cracks have appeared but none of serious nature.

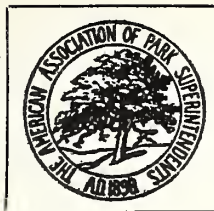
An oil storage station was built at Riverside Park, having a storage capacity of 14,000 gallons. This station is equipped to unload directly from cars and is a valuable asset to the Department in avoiding demurrage on cars during bad weather and in enabling the force to heat the oil to any desired temperature. This plant complete, including storage tank, pump, boiler, and pump house cost \$1,887.80.

OIL STORAGE—RIVERSIDE PARK.
Capacity 14,000 Gallons.

SPREADING ROAD OIL.

OFFICIAL COMMUNICATIONS

H. S. RICHARDS, Chicago, President



AND CONTRIBUTIONS

J. J. LEVISON, Brooklyn, N.Y., Sec.-Treas.

RECENT WORK IN ASSOCIATION PARKS.

(Continued.)

The Forestry Department of this city is under the control of the Park Commissioners.

During the past two years we have rebuilt a building for housing spraying apparatus, tools and supplies and the general work shop. This is on a part of the land devoted to the nursery, which was started two years ago with about six thousand trees, ranging from seedlings to trees ready for street purposes; since which time we have increased the number to about thirty-seven thousand, which includes some conifers for park planting. The nursery has been a place of interest to many people and has already shown a net profit on the expenditure. I am in hopes to develop this feature of the work on a larger scale in the near future by growing shrubs and ornamental evergreens as well.

We have completed an inventory of the trees on the public streets on which sidewalks have been constructed and have made an extensive card system for each tree. This includes 17,182 trees. This record gives the species of the tree, size of trunk, distance from nearest tree or intervening street, distance from curb line or line of property, condition of top, trunk and location, and each tree is numbered. This has already proven of great advantage in many ways. We have also made a thorough canvass of all these street trees, trimming out the dead and live wood, covering the cavities either with tin or cement, bolting, chaining, etc. This has been done on 7,733 trees and will be continued until they are all finished.

We are also investigating the condition of trees on all private property, sealing up every cavity in our fight against the gypsy moth invasion.

This, beside our usual work in the care of guards and special work on the trees will give you a little idea of what the work consists of here.

HAROLD J. NEALE,
City Forester.

Worcester, Mass.

In response to your request I am sending you a few clippings from the local press in regard to a new park that has recently been donated to the city.

The parks of Houston have been under my direction for only one year but we have made many needed improvements in that time and at a much lower expenditure than for the previous year.

A separate park report has never been printed but this year we hope to have one

printed so that other cities may see what we are doing in Houston.

Not including the new park Houston has sixteen parks, but only five are improved and ten unimproved. One other is now being improved.

I will try and furnish you some information from time to time for our column in PARK AND CEMETERY.

C. L. BROCK,
Superintendent of Parks.

Houston, Texas.

Following is an account of the plans for developing the new park, given in the local press:

"Within the large area of 285 acres there will be every feature that will characterize the park as a public institution for the good of all the people. The predominant theme will be playgrounds, plenty of room for everybody and cool and shady places for rest and recreation. Amusements for young and old will not be overlooked and they will be of great variety.

"There will be baseball and football fields, tennis grounds, golf links, croquet grounds, bowling greens and an athletic field. Open air swimming pools will be constructed containing shower baths, dressing rooms and modern conveniences of all sorts. There will be a wading pool and general playgrounds for children of all sizes. Many other outdoor games will be provided for. Among the most beautiful features of the park are the large number of beautiful shade trees and the sinuous Brays bayou which winds through the heart of the property. This will be widened and worked into a beautiful waterway and will be utilized for the purpose of drainage, fishing and for canoeing and other aquatic sports.

"All of these plans are now being elaborated by John W. Maxcy, to whom Mr. Hermann has outlined the general plan of development. The main entrance to the park will be on Main street, adjoining the grounds of the Rice Institute. This will be made into a beautiful boulevard, 248 feet in width, to be known as George Hermann parkway. It will be laid out according to present plans, with a central esplanade consisting of a series of separate plots, each one following a distinct idea in development. These central plots will contain winding walks of shell with aisles of shade trees, flowers and shrubbery.

"This entrance will be accessible by automobiles and carriages from Main street.

It will present an imposing aspect to approaching visitors to the park for an ornamental gateway will be constructed. In its center will be a monument, probably of bronze, which everyone will recognize as a reproduction of the generous spirited and liberal minded donor, George H. Hermann.

"By far the majority of visitors to the park will enter from the car line, one block to the west of Main street, and here another ornamental entrance way will be constructed. This entrance way will lead into the park proper. Branching out from the entrance way in several directions will be winding boulevards, dividing the park into sections and opening up a continuous change of beautiful vistas. Footpaths running at random, on either side of which will be constructed attractive gardens will be laid out for the pedestrians. Among other features will be a nut grove.

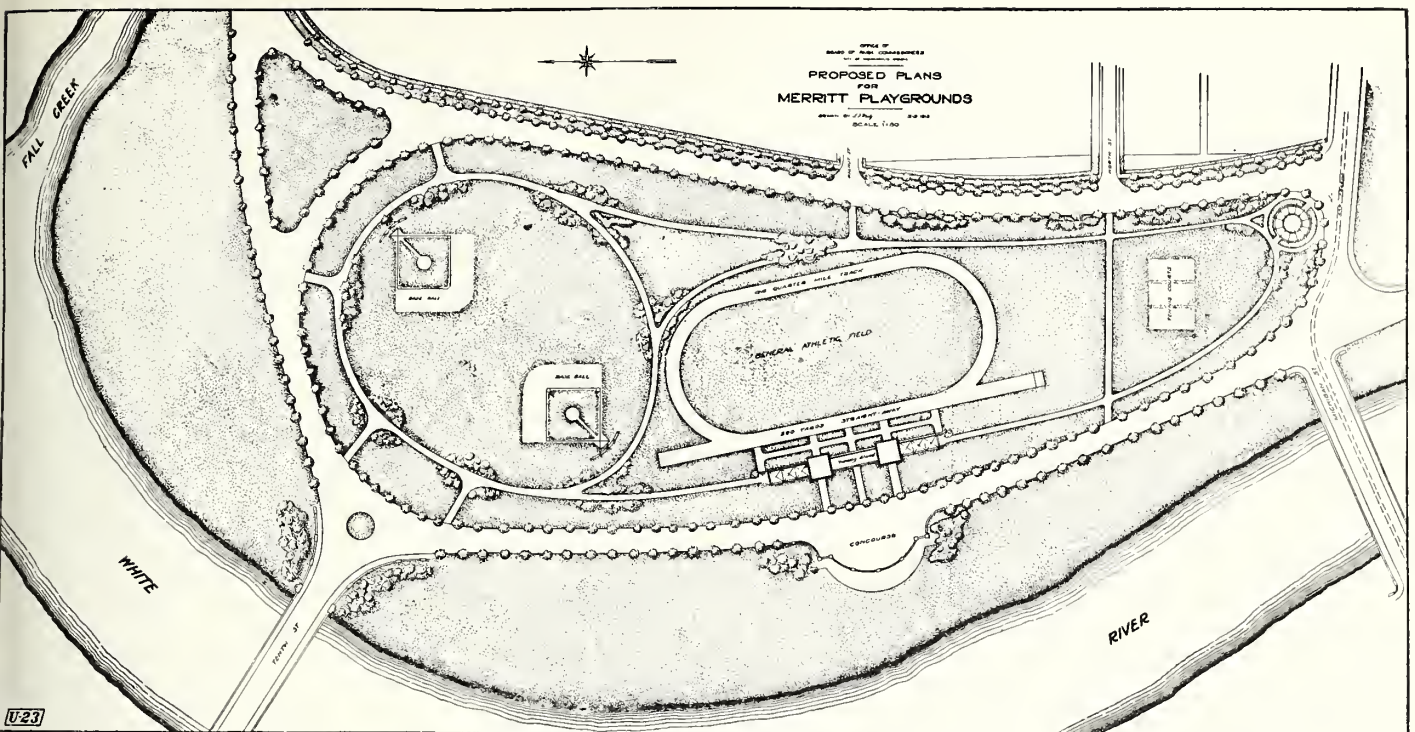
"Besides this main entrance there will be other entrances to the park, which have not yet been definitely decided upon. One of these, however, will be a continuation of Montrose boulevard, running southerly and opening into the park and the Rice Institute grounds. These are only a few of the ideas that have been outlined and which John Maxcy is in the process of developing in conformity with the wishes of Mr. Hermann.

"Adjoining the park property at the northwest corner is a 10-acre tract of land. This is the site of the proposed hospital, for which purpose Mr. Hermann has set it aside just as he is now giving to the city of Houston the beautiful park property. This is another feature which has been near to the heart of Mr. Hermann, but which from his modest nature he is unwilling to discuss just at present, other than that the city shall have it."

* * *

My work in Columbia is the development of the grounds of the State University in conjunction with the maintenance of other present properties.

Recently, this institution has begun a rapid expansion, having acquired new city properties and erected extensive buildings. We are developing in quadrangular system the old campus comprising the old Academic and Engineering quadrangles and we have just begun a new Science quadrangle on which five \$100,000 buildings have been built. It is our plan next to build a new Agriculture quadrangle and one for the departments of Education and Domestic Science. Our Medical Departments will be largely extended.



PLAN FOR A RIVERSIDE PLAYGROUND IN INDIANAPOLIS.

rooms were of great service to the skaters, and the Logan Park skating rink was more popular than ever. A new arrangement for the playground has been worked out and is shown in our plan.

The following estimates of the equipment needed and the cost of equipment for three new playgrounds to be established in Minneapolis, has been carefully prepared by Superintendent Wirth and his assistants and will be suggestive to those who are studying playground problems. These estimates are for summer equipment only:

Sumner Field—Estimate \$2,490.00.
 3 sets of swings. 1 wading pool.
 3 teeters. 2 basket ball outfits.
 1 giant stride. 2 volley ball outfits.
 1 horse. 1 jump pit.
 1 set parallel bars. 1 shot put ring.
 1 set traveling rings. 1 backstop.
 2 gymnastic outfits. 2 football goals.
 2 sand boxes.

Stewart Field—Estimate \$2,790.00.
 3 sets of swings. 1 set parallel bars.
 3 teeters. 2 basket ball outfits.
 1 giant stride. 2 volley ball outfits.
 1 set traveling rings. 1 jump pit.
 2 sand boxes. 1 shot put ring.
 1 wading pool. 1 backstop.
 2 gymnastic outfits. 2 football goals.
 1 horse. 2 tennis backstops.

Prospect Field—Estimate \$3,430.00.
 5 sets swings. 2 volley ball outfits.
 5 sets teeters. 2 basket ball outfits.
 1 giant stride. 2 sand boxes.
 1 horse. 1 wading pool.
 1 set parallel bars. 1 small slide.
 2 gymnastic outfits. 1 backstop.
 1 set traveling rings. 2 football goals.
 1 jump pit. 2 tennis backstops.
 1 shot put ring.

Sheridan Field—Estimate \$150.00.
 1 backstop. 2 football goals.

Total estimates, \$8,860.00.

The Indianapolis Park Board calls attention in its annual report to the fortunate and unusual location of local playgrounds all along the stream bank parkways. More, perhaps, than in most communities, this improvement in Indianapolis brings the playgrounds within reach of practically the entire population and justifies the whole improvement on this ground alone.

The plan for Merritt Playground, one of the typical river bank playgrounds of Indianapolis is shown here. The plan shows approximately the general features which are to be employed in the construction. The plans show that only a shelter house will be built with baths and locker-rooms which will be for playground purposes and also for bathers who may care to use the river which is only about twenty yards west. The ordinary type of small apparatus for the younger children will be installed later.

ASKED AND ANSWERED

An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

Laying Out New Cemetery.

Editor Asked and Answered: Can you give me an idea as to the number of lots that could be sold from a twenty acre tract which I have under consideration for a cemetery and at about what price per lot? I have an option on a good location which can be bought for \$250 per acre. My object in taking this matter up is to make some money and would like some general information before going into the project.
 —J. W. E., Pa.

Editor Park and Cemetery: For our benefit in platting our new cemetery will you kindly wire by night letter at our expense the per cent. of the different size lots you would recommend us to plat.—Land Co.

It would not be possible for any one to give you definite advice of any value about the laying out of your cemetery without making a thorough study of conditions on the ground. The first thing you should do is to engage a landscape architect who

specializes in cemetery work to make a report for you on the possibilities of your land. You would be very unwise indeed to try to develop any kind of a tract for cemetery purposes without such examination. In this issue of PARK AND CEMETERY will be found the advertisements of several firms who could render this service in a satisfactory manner.

We however, give herewith some general suggestions from practical cemetery men that may be of some assistance to you:

"It is impossible to give any definite statement as to the percentage of lots to single graves. There are so many local conditions which govern. In cemeteries where the lots are priced low the percentage of single graves is necessarily less, because of the fact that many people will purchase low-priced lots who are unable to buy high-priced lots, and hence take the single grave instead. The better way is to open up a single grave district to cover

a moderate number of graves and also to open up a few sections of lots, leaving the balance of the cemetery to be subdivided when the time arrives and on the basis of the experience gained in previous sales. It would be a very foolish proposition to subdivide the whole cemetery into lots, as local conditions so largely govern the sizes needed, and the proportion between single graves and lots. Experience only will be a definite guide.

The writer does not exactly understand the inquiry about park space. If reference is had to what is usually called a planting space, that is, the free ground bordering the drive and in front of the lots, it can be said that the maximum of such space is about 4 feet in width and the minimum nothing at all. In some cemeteries it is possible to run the lots clear to the driveway, restricting interments, however, to some distance from the front of the lot. Our practice is a planting space of two feet. This makes a protection for the lots, and also gives us a space in which water pipes and sewers can be laid, instead of under the center of the driveway.

The question of the size of lots was covered very fully by the writer in a paper read before the American Association of Cemetery Superintendents, and printed in your columns some time ago. This paper is entirely too long to repeat at this time, and it would be well to refer your correspondent to it as published in one of your back numbers.

W. N. RUDD,

President, Mt. Greenwood Cemetery,
Chicago, Ill.

[The article referred to by Mr. Rudd, was a paper read before the New York Convention of the Association of American

Cemetery Superintendents and published in PARK AND CEMETERY in October, 1909. It was entitled: "The Subdivision of a Cemetery into Sections, Lots and Single Grave Sections," and is the most exhaustive and authoritative discussion of this subject in print.—Editor.]

Replying to your correspondent's question regarding the percentage of lots to single graves on a new cemetery of about 50 acres and the percentage reserved for park spaces I shall say that it is an ever recurring question that allows of no general solution. For one thing it depends on the class of people inhabiting the district, whether generally well to do or otherwise, also on conditions governing neighboring cemeteries, whether the new cemetery is decidedly above them in "class," even with them or below. In the first case it will get its full share and more of lot owners, in the last case single graves will probably preponderate. Whatever estimate is made beforehand, if ever so well considered, will turn out wrong,—that is the only sure thing, but then there is this remedy: Select the two sections of the cemetery that are the most desirable for lots and single graves respectively and plot say one half of each, leaving a neutral zone between them. It will take some years before a 50 acre cemetery is half occupied, and long before that time it will be apparent whether a larger proportion of lots or of single graves will be needed, and accordingly the neutral zone can be encroached upon from the lot side or the other.

The amount of land reserved permanently for park purposes does not generally require a definite decision at the outset. Treat the question generously, for,

as mentioned above, there will be plenty of area unoccupied for a number of years, and this can be used for planting, etc. Try not to sell the plotted lots in too solid areas, but leave unsold stretches between them for planting. Then by the time these stretches are needed for burial purposes, other planting on the first sold lots will have grown up to be prominent enough to maintain the parklike appearance. There are generally certain areas that lend themselves distinctly to special treatment for park purposes and ought to be devoted to this exclusively, in that case it is well to use them and maintain them as park as far as possible, but for the main part of the cemetery it is the most economical and satisfactory way to call it nearly all park from the beginning and let the sale of lots take its course, depending on the first sold sections to replace the park land that is sacrificed each year. It is to the lot owners' interest to cooperate in this rather than to make their lots look like a marble cutter's exhibition.

Regarding sizes of lots, they also depend to some extent on the class of population and on custom in the locality. In some cases 20 ft. x 20 ft. is the standard size, varying down to 14x14. It does not matter much, for the lots can very well be designed with the possibility in view of cutting them up in halves or less, or of disposing of several lots together to form one large burial place. There are often cases where people will acquire extensive grounds and treat them carefully with planting, etc., as a little country place and, of course, it is impossible to foresee to what extent such a policy will be adopted.

OTTO SONNE,

New York City. Landscape Architect.

MINERAL SPRINGS IN CITY PARK LAGOON

Enid, Oklahoma, has recently finished the development of a park containing a water feature that is probably unique, namely, a

series of mineral springs that have been utilized in a lagoon.

A few years ago the Government gave

the city of Enid about ten acres of broken land lying within six blocks of the heart of the business district. The park board secured \$10,000 to be used on improvements. Realizing the hidden beauties in this tract of ground the transformation was speedily brought about and today Spring Park is considered one of the most beautiful parks in the state. The five mineral springs which gush from the base of a bluff which runs through the grounds have been cemented in, making them sanitary and their flow is carried through under the walk, where they empty on an apron and flow into the lagoon. This arrangement provides convenience and cleanliness to the public. Hundreds visit this park each day and drink the health giving virtues of the different mineral springs, and enjoy the pleasures of boating on the lagoon, while the children revel in the cool waters of the wading pool. Symmetrical walks, vine covered pergolas, beautiful flower beds, shrubbery in abundance, to-



MINERAL SPRINGS LAGOON COMPLETED; SPRING PARK, ENID, OKLA.



CONSTRUCTING LAGOON IN SPRING PARK, ENID, OKLA.

gether with trees of many varieties, complete the landscape of this handsome park. Paved streets lead to the park entrance. The grounds are lighted from electroliers

of ornamental design. A band stand is placed on the north side of the lagoon, while the bluff on the south side is tiered with cement seats sufficient to accommo-

date several hundred. The people of Enid realize the money they have spent on their parks has proven to be the most satisfactory and is actually the biggest dividend payer of any investment the city has ever made. The planing and landscaping of this park was done by Spencer Herbert Allen, Supervisor of The City Parks.

Probably no city of its size in the southwest has made more progress along the line of municipal beautification during recent years than Enid, Oklahoma, a city little more than nineteen years old, with a population of over 15,000. The majority of western cities of this class have paid but little attention to parks and other improvements which go so far towards the making of ideal living conditions, but Enid is fortunate in having a park board composed of men who realize and appreciate the value of attractive parks, and they are now developing a system of city park improvements which has already given Enid the distinction of being one of the most beautiful cities in Oklahoma.

NEW ENGLAND CEMETERY MEN AT BARRE

The New England Association of Cemetery Superintendents held what its members are unanimous in declaring was a unique summer outing, June 16 and 17, at Barre, Vt., the greatest monumental granite producing center in the world. The meeting was the biggest and best attended yet held and in the interesting and profitable things to be learned in viewing the great granite quarries and the manufacturing plants where more cemetery monuments are made than anywhere else in the world, the occasion was as instructive as it was pleasant.

The meeting was also unique in the history of the organization in the whole-souled hospitality with which the entire town of Barre turned out to welcome its guests. The Board of Trade, the merchants' and business men's organizations, the Granite Manufacturers' Association, the Quarry Owners' Association and individual citizens of the town took charge of the visitors from the time they alighted from the train till they left town. They were quartered in the homes of the citizens and were the people's guests, individually and collectively, during every minute of their stay.

On the morning of June 16, when the Green Mountain express rolled into the local station, with two special accommodation cars attached, representatives of the four organizations in charge of the entertainment were present to extend greetings. Across the square was flung a huge banner bearing the words "Barre Welcomes the Cemetery Superintendents," and a sight of this cordial salute was one of the first things that greeted the eyes of forty-two

delegates, many of them with their wives, who alighted from the train and were directed to the breakfasting place by committees from the Barre Board of Trade, the Granite Manufacturers' Association, the Quarry Owners' Association and the Barre Retail Merchants' Association.

One of the enterprising features of the outing came immediately after 9 o'clock Tuesday morning, when special cars preceded one of the big Barre railroad engines up Millstone hill, to show the visitors how

the stone is quarried that is finding its way into so many of New England's cemeteries. Stationed in the several cars were megaphone men, who explained the various sights. A progressive tour of practically every quarry on the hill was made, once the train started at Websterville. Quarries of the Wells-Lamson Co., Wetmore & Morse, Barclay Bros., the Consolidated Co. and the E. L. Smith Co. were visited in succession. In a few cases it so happened advantageously that some of the monstrous



NEW ENGLAND CEMETERY ASSOCIATION SEEING BARRE, VT.
Left to right: President H. S. Adams; Alex Hanton, Supt. of Cemeteries, Barre; H. A. Derry, Everett, Mass.; Sec. N. E. Cem. Assn.

stones were being lifted out of the quarry just as the visitors arrived.

Crossing the brow of the hill, the tourists descended into the Smith Co.'s big quarry at Graniteville. Here they had the first diverting experience of the trip, for near the surface of the quarry a photographer had been posted, and it was soon after the train halted that the party stopped to be snapped. Continuing up the railroad, the next stop was made at Jones Bros.' immense deposits and the Barclay Bros.' quarries. Swinging around the road again, the

to judge for themselves whether a whole village can be kept as attractive in summertime as a cemetery. The journey back to Barre was started in the late afternoon, but every car arrived in the city sometime before dusk.

A get-together banquet was held in the Howland hall the first night, with about 250 people participating, including the Cemetery Superintendents, Board of Trade, Granite Manufacturers, Quarry Owners, and the Merchants' associations.

It was nearly 8 o'clock when the ban-

was an appropriate inscription. The program follows: Remarks, H. J. M. Jones, "Even a fool, when he holdeth his peace, is counted wise"; address of welcome, Alderman John F. Cook, "Are we to mark this day with light or dark granite?"; response, Henry S. Adams, superintendent of Forest Hill Cemetery, Jamaica Plains, Mass., and president of the New England Association, "From the four corners of New England they came"; "Barre Granite," Secretary Charles H. Wishart, of the Granite Manufacturers' Association, "Our



NEW ENGLAND CEMETERY SUPERINTENDENTS IN E. L. SMITH & CO. QUARRIES AT BARRE.

visitors stopped at the James K. Pirie quarry and the mammoth plant of Boutwell, Milne & Varnum. A thorough inspection of the quarries there ended only when a large number of automobiles from this city parked near the company's office and the visitors got aboard for the scenic ride to Williamstown Gulf, where lunch was served out in the open air, and afterwards an automobile ride was enjoyed by all to South Royalton, where the cars were parked in the village square and the superintendents were given an opportunity

queting began. Covers had been laid for upwards of 250 people, and there was scarcely a vacant place at the long rows of tables. The dinner was served by the Barre Woman's Club, the members of which were assisted in the serving by a number of young women of the city.

H. J. M. Jones, acting in the capacity of toastmaster, was a happy master of the occasion, and his entertaining sallies were provocative of much mirth. The order of exercises was printed on attractive folders and beneath the name of each speaker

mountains, at a distance, appear airy masses, but seen near at hand are Barre granite"; "Our Merchants—What They Are Doing for Barre," D. J. Morse, president of the Merchants' Association, "God hath made man upright, but they have sought many inventions"; music, orchestra; cornet solo, Mr. Forsell; "The Quarries," Douglas M. Barclay, president of the Quarry Owners' Association, "Rough quarries, rocks and hills, whose heads touch heaven"; solo, Thomas J. Mercer; "Municipal Organizations," President M.



Looking into the Depths of the Wetmore & Morse Quarries.



Refreshments at the Boutwell, Milne & Varnum quarries.



Down Where the Big Blocks Come from in E. L. Smith & Co. quarries. BARRE GRANITE QUARRIES.

S. Rounds, of the Board of Trade, "Have we come to this—the undertaker?"; "New England Cemeteries," J. C. Scorgie, superintendent of Mt. Auburn Cemetery, Cambridge, Mass., "Let's talk of graves, of worms and epitaphs"; solo, Mr. Mercer; "Barre as I First Saw It," John W. Gordon, "A politician: come give us a taste of your quality"; "The Cemetery and Monument Manufacturer," H. C. Whitaker, of PARK AND CEMETERY; chorus singing, "Auld Lang Syne," entire company.

When it became known that Mayor Ward would be unable to extend a personal welcome to the guests, that duty devolved upon Alderman Cook who spoke briefly of the happy circumstances which made a welcome address possible. A fitting response was made by President Adams of the association, who said he encountered considerable difficulty in finding words to express the appreciation of the superintendents over the reception accorded them in Barre. Secretary Wishart interlarded an interesting story of the development of Barre granite with some very humorous quips. D. J. Morse, speaking for the merchants, referred to the friendly spirit of co-operation shown his association by other local organizations and referred briefly to some of the things the association hopes to accomplish in the interests of a bigger Barre. Speaking for the quarry owners, Douglas M. Barclay

gave a retrospective view of quarry development on Millstone hill. M. S. Rounds, of the Board of Trade, emphasized the necessity for unity of action among the semi-civic organizations of the city

"Barre is making and preserving history," said J. C. Scorgie, who spoke briefly on New England cemeteries. Mr. Scorgie spoke of the disillusionment the superintendents had experienced in viewing Barre quarries and joined with some of the previous speakers in lauding the native product. Himself a Scotchman, Mr. Scorgie was able to relate some highly diverting anecdotes in dialect. John W. Gordon pictured an interesting study in contrasts between the Barre of today and the little settlement of forty years ago, closing with some original stanzas that were well received. The last speaker, Henry C. Whitaker, laid special stress on the community of interests which lies in front of the monument manufacturers, as well as the cemetery superintendents. Both are interested in an effort to beautify our cemeteries, he said, and both should be able to work in concert.

Wednesday morning they were given the opportunity to inspect some of Barre's modern granite sheds, and after spending some time in the southern end of the city the party was carried back through the city to the north end, where more time

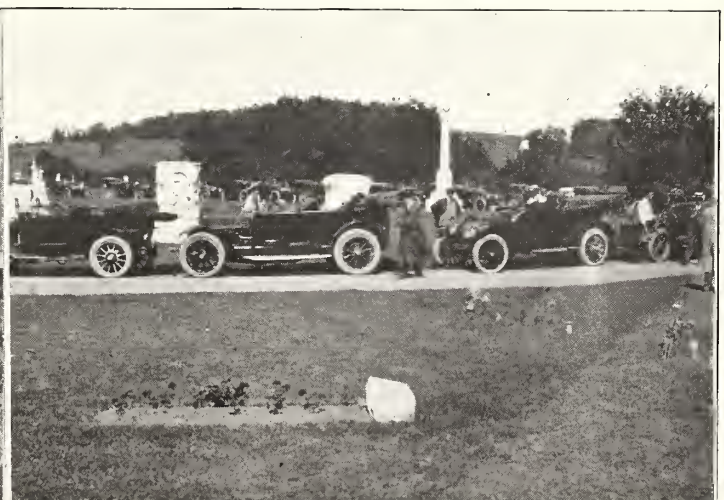
was enjoyed in watching the operations incident to fashioning splendid monuments out of the rough stone.

Dinner having been served at noon, automobiles were pressed into service for an inspection trip through Barre cemeteries. Both Elmwood and Hope cemeteries were visited in succession. Later there was a trip to Montpelier and a circuitous side excursion along the Northfield road to Berlin Pond. Returning home, the party planned to make a stop at the Morrison farm on west hill. Wednesday night supper was served in the church vestry and a band concert was enjoyed in city park in the early evening.

There was no business session in connection with the outing except for a few minutes when the members gathered in Hope Cemetery and voted in the following new members: Daniel Straight, Supt. Oak Hill Cemetery, Woonsocket, R. I.; John B. Tewksbury, Chairman County Cemetery Commission, Winthrop, Mass.; Fred W. Hammond, Asst. Supt. Blossom Hill Cemetery, Concord, N. H.; L. G. Van Leuven, Surveyor Mt. Auburn Cemetery, Cambridge, Mass.; J. P. Harrington, Trustee Catholic Cemeteries Corporation, Providence, R. I.; William G. LaPlace, Supt. Fountain Hill Cemetery, Deep River, Conn.; Derward W. Hill, Supt. Mt. Feake and Grove Hill Cemeteries, Waltham, Mass.



LUNCHING AT A VERMONT FARM.



VISITING HOPE CEMETERY IN AUTOMOBILES.

FOREST HOME, MILWAUKEE'S MODERN CEMETERY

A Description of Milwaukee's Beautiful Cemetery, Its Buildings and Its Management, by Superintendent James Currie.

Photographs by E. T. Hindman Co.



IMPOSING MONUMENTS IN BEAUTIFUL SURROUNDINGS AT FOREST HOME. BLATZ MAUSOLEUM AT RIGHT.

One of the finest examples of the modern park cemetery that has been developed to bring out the best in landscape art and efficient management is Forest Home Cemetery, Milwaukee.

We have previously described the entrance to Milwaukee's beautiful park cemetery, and our readers will be equally interested in this descriptive account of the grounds, and the management of the affairs of one of the most modern cemeteries in the country that has been prepared for PARK AND CEMETERY by Superintendent James Currie.

Situated on the southern borders of the city of Milwaukee, about four miles from the city hall, Forest Home occupies a tract of land approximating 190 acres, peculiarly and admirably adapted by nature for cemetery purposes. Easily and conveniently accessible now from all points in the city, it was, when established in 1850, considered so far removed from the city limits that it probably never would be encroached upon to any appreciable extent by the homes of the living, nor was it considered likely to become an obstacle barring the city's expansion, nor, on the other hand, have its own peace and quiet invaded and disturbed by the din and business activities. But the march of progress has been so rapid and to that extent has Milwaukee developed that today Forest Home is nearly all within the city limits, almost entirely surrounded, except on the south, by a population so dense that there are now very few unoccupied lots in the vicinity. Although in a sense rapid, these changes have been so gradual that the cemetery has been, so to speak, able to adapt itself to its environments and create for itself a place in the community, not only undisputed, but

welcomed as a beauty spot and a final resting place where sleep so many of Milwaukee's pioneers and later generations of her most illustrious citizens.

Previous to the establishment of Forest Home the need for a larger and better burial place than was then afforded by the several small cemeteries in the city was becoming more and more apparent. It was easy to estimate that these even in the aggregate were altogether too small for future requirements, too premature in plan, unattractive in aspect, incapable except to a limited extent of improvement, and moreover, far from permanent. A few leading citizens, alive to the situation, actuated by a spirit of true and unselfish philanthropy, began a study of the problem, excluding all thought of personal gain or mercenary profit of any nature, the only motive being the desire to establish a permanent cemetery of liberal size in a suit-

able location on the best land adapted for the purpose which could be procured, and adopting the best of modern ideas in laying out the grounds and for the general management of the affairs of the cemetery that it might be a place of beauty and a source of pleasure and pride to the whole community as well as to those directly concerned, and its business be conducted solely with the view to promoting the best interests of the cemetery and its lot owners. So well and so wisely did these single-minded and public-spirited citizens accomplish their purpose that it may be consistently said that complete success has attended their efforts. A suitable place was selected and a special act of the legislature was secured to insure perpetuity, so that the dead might be buried in the full confidence that their bodies would never be disturbed.

In selecting a place for the burial of the dead and a name by which the cemetery should be pleasingly and suitably designated, all who have visited Forest Home will, I am sure, agree with me that the persons who took upon themselves that responsible duty displayed a painstaking interest in their mission and an intelligent understanding of conditions to meet all requirements in the choice they made of a tract of land so well adapted for the purpose. All of the land first purchased and much of the area subsequently acquired was a virgin forest, hence the appropriateness of the name Forest Home, so euphonious to the ear and so agreeably suggestive of rest and peaceful seclusion.

The formation of the ground is a light loam on a deep subsoil of sand and gravel. The surface is rolling, presenting a pleasingly varied and almost ideal contour, nowhere too abrupt in its undulations for practical purposes, yet in places bold enough to approach the picturesque. On the whole, the landscape is a series of gen-



ENTRANCE AND ADMINISTRATION BUILDING, FOREST HOME.

tle slopes and comparatively level plains, lending themselves most accommodatingly to the accomplishment of the beautiful, with little trouble, expense or serious demands on the creative genius of the landscape gardener except as he is limited by the restrictions of cemetery conditions, which preclude the opportunities and freedom afforded in the park for broad artistic and natural effects, which may only be attained approximately by a due appreciation of requirements and the skillful exercise of a thorough knowledge of the art of landscaping in the cemetery. How well that has been accomplished in Forest Home the writer must modestly leave to the judgment of the visitor and critic, but he can authoritatively say from an experience of thirty-four years in Forest Home that it is no simple problem, easy of solution even under favorable conditions, to produce a bit of nature or create a beautiful landscape and maintain it with any approach to the ideal and have the grounds satisfactorily serve their purpose as a resting place for the dead.

The park-like approach to the main entrance of the cemetery, extending 200 feet from the street to the gates, has a very pleasing effect and is much admired. The broad avenue, 55 feet in width, flanked on both sides by a generous stretch of lawn and a liberal planting of trees and shrubs arranged in irregular groups and borders which effectually hide the iron picket fences in the background, is designed to give a broad and bold effect and an air of quiet dignity and repose.

Continuing beyond the gates into the grounds, the same width of avenue is maintained for some distance until it is lost to sight behind the thick planting of trees and shrubbery as it gracefully curves to the right and is divided on either side of the pyramidal rock fountain (a central feature at that point) into considerably narrower avenues, gradually diminishing in width as they lead away to the east and west and by a series of ramifications in all directions throughout the grounds.

The avenues in general are very generous in width, the average being about 25



WATER VIEW IN FOREST HOME. UNIQUE STONE GROTTO IN BACKGROUND.

feet; nowhere are they less than 16 feet, and in places the principal avenues, made very wide because the traffic seemed to demand it, are now being narrowed to a maximum width of 25 feet and the margins laid out in grass are being utilized as planting spaces, affording excellent opportunity for an irregular bordering and grouping of dwarf shrubbery, very pleasing from a landscape point of view and very effective in some places as a screen to partially hide an obtrusive multiplicity of monuments and other stone work, or break an objectional vista.

Deciduous shrubs of all kinds, adapted to the climate, and some dwarf conifers are freely planted throughout the grounds, lot owners in general co-operating liberally in the general decorative scheme by a proper embellishment of their own lots with appropriate shrubs and hardy plants.

Flowering and other decorative bedding plants are extensively used to embellish the grounds at the expense of the cemetery and flower beds and vases are adopted to a considerable extent for the decoration of

individual lots at the expense of the lot owners.

In the general care of the cemetery the grounds are kept clean, leaves raked, etc., and the grass is kept quite short by frequent mowing, an attempt being made to go all over the grounds once every week, and when necessary all spaces reserved for ornamental purposes are freely watered. All lots in the cemetery are given this general care, except that no watering is done unless it is ordered and paid for by the lot owners.

The water works system, ramifying all improved sections of the cemetery; an abundant supply of water from the city service and two artesian wells on the grounds provide ample facilities for sprinkling the lawn and a supply of water wherever needed. Self-closing hydrants are located at convenient distances for the convenience of lot owners. Hose connections below the surface of the ground are so situated that from 50 to 150 feet of hose will reach all points to be watered. It is planned to so arrange the system ultimately that lines of hose 50 feet in length will suffice.

Approaching the entrance, the first object which particularly attracts our attention is the new office or administration building, completed in the fall of 1909 at an approximate cost of \$30,000. It is situated to the right and a little removed from the gates. The building is a large and substantial structure of Gothic arch-stone in rough ashler. The interior is comecture, built of Lake Superior brown sand-modious and the arrangement for utility and comfort convenient, very effective, and considered beautiful. It may be said in all candor that few cemetery offices anywhere fied and pleasing external appearance and excel this building in its simple but dignified especially in the well arranged interior



SHOWING UNUSUAL TREATMENT OF ENTRANCE, SET BACK FROM THE STREET.

features contributing to the comfort of lot owners and the general public and affording every convenience for the officials and clerical force of the cemetery.

The chapel, situated a short distance from the entrance and to the left of the main avenue, is a handsome building, also of Gothic architecture. It was built in 1891-92. The exterior walls are Lake Superior brown sandstone, the interior being lined with buff-colored pressed brick. Conservatories attached on both sides, so adapted that a perfect harmony of design is maintained, constitute a unique feature of this building, contributing very effectively to the pleasing aspect of the interior without detriment to the exterior appearance of the structure. These conservatories are filled at all times with palms, ferns and other decorative tropical plants, which are especially effective and pleasing in the winter season. The chapel is ready for services at all times and is free to all applicants. It also contains a public receiving vault and crematory, the latter being beautifully finished with polished English veined marble side walls, marble mosaic floors and ivory woodwork. The equipment is the most modern and perfect system of incineration yet devised. Here an adult body may be reduced to its original elements in the average time of one hour, and in the most satisfactory and sanitary manner. One hundred and twenty-one bodies were cremated in 1913. The cost of cremation is \$25. This convenience for the disposition of the dead suggests the thought that no cemetery is complete in its appointments without a modern crematory.

Forest Home is also equipped with a greenhouse establishment aggregating 25,000 square feet of glass, arranged on the most approved, up-to-date plan, for the cultivation of cut flowers, bedding and other decorative plants for the embellishment of lots and for the planting of the numerous flower beds in the general decoration of the cemetery. Approximately 145,000 plants are produced annually for that purpose.

Forest Home, like many other cemeteries established half a century and more ago, may be said to be unfortunate in respect to its multiplicity of monuments and headstones, many of them of poor or mediocre designs, which crowd some of the old sections to an apparently unwarranted extent. But this objection has been materially modified in other sections and under a more careful and systematic supervision. Designs of all structures must now be submitted to the superintendent for approval before contracts are awarded, all designs and particulars submitted being considered strictly confidential. The details, artistic features and general merits of every monument presented are all carefully considered with a view to assisting each lot owner in procuring a monument individual in style, expressive of personal selection and taste, pleasing to himself, yet harmonious with its environment. Replicas of special designs

are not permitted and an effort is made to have all monuments different in design.

There are many very handsome and costly monuments in the cemetery, some of them being the best examples of the designer's skill and sculptor's art in monumental architecture. Prominent among them are those erected by or in memory of the following: Joseph Schlitz, Charles G. Pfister, Judge Edward G. Ryan, Henry C. Payne, Ferdinand Schlesinger, Julia Chaffee, Edward Sanderson, heirs of Sarah Wirth, Edward A. Uhrig, John Duncan, Peter McGeogh, A. K. Hamilton, William Kieckhefer, Sebastian Walter, Paul Asch, Senator M. Carpenter, George Brumder, Henry Fellows, John B. A. Kern, Benjamin Young, S. S. Merrill. A number of these were illustrated in our last issue and several more are shown this month.

Many thousands of dollars are represented in these and the numerous other good monuments erected in the cemetery. How much in the aggregate, it is almost impossible to guess. Suffice it to say that many of them cost from one thousand to five thousand dollars each, and a few of them much more.

Mausoleums are not much in favor in Forest Home; in fact, they are discouraged by the cemetery management; but they are permissible in certain locations, provided the plans are approved and a sufficient endowment is deposited with the trustees of the cemetery for maintenance. The only mausoleums in the cemetery are the E. P. Allis, L. M. Alexander, Val. Blatz, Matthews Brothers, Mary T. Cameron, G. W. Garrett and Alphonse Chaintron.

All monuments and markers must have foundations of solid masonry and of a depth and dimensions deemed sufficient by the superintendent, and all foundations are built by employees of the cemetery. All markers and corner posts are set by cemetery employees. No monuments are allowed in single grave sections, but markers not exceeding two feet in height may be set at each grave. In certain sections markers and corner posts are set flush with the surface of the ground.

Forest Home Cemetery is under the jurisdiction of St. Paul's Episcopal Church, but in all respects it is strictly non-sectarian. The corporation is entitled "The Rector, Wardens and Vestrymen of St. Paul's Church, Milwaukee," who as trustees administer all the affairs of the cemetery. From their number a committee of three, referred to as the Cemetery Committee, is annually elected. This committee administers the general affairs of the cemetery, subject to the control of the trustees. Many of the leading citizens of Milwaukee were prominent among the men who managed the affairs of the cemetery in the early years of its history. No one among them all is more deserving of praise and appreciation than the late David Ferguson, long associated with Alex. Mitchell in the Marine and Fire Insurance Company

Bank, now the Marine National Bank. To him is unanimously and unstintingly accorded by all who knew him personally the greatest credit for all that was accomplished in the development and improvement of the cemetery during his long years of incumbency as a member and chairman of the Cemetery Committee. In later years among the prominent men actively engaged in the management were: B. K. Miller, A. Antisdell, Samuel Chandler, Judge George H. Noyes, A. K. Hamilton, Edward Ferguson, George G. Houghton, O. C. Fuller, Arthur K. Camp, Howard S. Eldred, Thos. Spence, John A. Whaling, Richard H. Norris, W. S. Seaman, Edwin E. White and Charles E. Sammond. James A. Pirie, father of William S. Pirie, the present secretary, was secretary and treasurer of the cemetery for many years up to the time of his death in 1894.

At present the Cemetery Committee is composed of Mr. Grant Fitch, Mr. Wheeler P. Bloodgood and Dr. Albert Wm. Myers.

The trustees of Forest Home, ever fully appreciative of the purpose which inspired the founding of the cemetery, have always given freely of their time and consideration to the management of the cemetery, and that without compensation, save the natural pride and satisfaction derived from work well and faithfully performed in the pursuit of philanthropic and unselfish purposes.

The terms under which the cemetery is held by the trustees require that all receipts of whatever nature derived from the cemetery shall be expended for the extension, care, improvement and embellishment of the grounds. A portion of the receipts from the sale of lots and graves, at present being 20 per cent of such sales, is set aside as a general reserve fund, the income of which is to be used and expected to be sufficient to properly care for the grounds in general after all lots shall have been sold.

Another fund, known as the perpetual care of lots fund, provides for the care and maintenance of individual lots in perpetuity. It consists of gifts, bequests and deposits established as endowments, the income of which is used for the special care of the lots so endowed in accordance with the terms of the contract. In brief, the plan is as follows: No amounts are accepted less than those stipulated in a fixed schedule of prices for given areas, the rates ranging from 50 cents to \$1 per square foot in inverse ratio to the areas of the lots. All amounts are kept in a separate fund and invested in best securities. On the first day of May each year the total income of the fund is apportioned in this manner: One per cent is carried into the general reserve fund of the cemetery to cover the expense of investment, etc., and the balance is apportioned pro rata to the several amounts of the special fund and the pro rata amount so apportioned is the amount

which may be expended during the current year on the lot for which the endowment has been made. Any amount unexpended in any year is credited and added to the amount allowed the following year. No guarantee is given except that the apportioned income shall be expended on the lot in doing work specified or such work

the present number may ultimately be doubled. It is estimated that at the present average rate of sale the unsold area of the cemetery will be ample to supply all demands for lots for a period of sixty years or more.

The new tract of thirty acres recently purchased, adjoining the old grounds on the

time worn the cliff down to its present condition. The opening as shown is a cave, in the back of which is a spring, a small stream meandering into the larger stream in front. This has been a veritable curiosity shop to visitors in the cemetery. Hundreds of names are written and engraved on the stones. The stone with which



TWO BEAUTIFUL LAWN VIEWS IN FOREST HOME CEMETERY, MILWAUKEE.

as may be deemed necessary so far as such income will allow.

Lots in Forest Home are sold at the rate of 75 cents, \$1 and \$1.50 per square foot, according to location, plus the perpetual care charge in some sections. In 1909 a resolution was adopted introducing compulsory perpetual care in the sale of all unsold lots in certain sections, based on the scale of prices for perpetual care already referred to. The plan has proven so popular and promised such satisfactory results that the trustees contemplate its general adoption at an early date, so as to include all unsold lots in the cemetery and all sections yet to be improved within its provisions. As watering the lots in unsold improved sections is included in this plan, the effect is very pleasing, contributing much to the general appearance of the cemetery.

The lot owners of the cemetery now number 7,745, who have contributed of their families a number which, together with those interred in single grave sections, make the "population" of this "silent city" approximately 39,000, a number which is increased at the rate of about 800 each year. In this connection it may be interesting to note that no Sunday funerals have been permitted in the cemetery since June 30, 1907, an innovation which was approved without dissension by all lot owners in the cemetery, with much satisfaction to the management. How many more persons may yet be accommodated with lots within the present limits of Forest Home may only be conjectured, but as only about one-half of the total area available for burial purposes has been sold, it may safely be assumed that

east, affords a splendid opportunity for the development of this addition to the cemetery to equal, if indeed it does not surpass, the best of the present grounds. The trustees of the cemetery have already determined to include all of this tract in the compulsory perpetual care plan. All of the objectionable features so prominent in many parts of the older sections of the cemetery will be eliminated and only the best of modern ideas introduced, conformable with the basic principles of cemetery development, maintenance and management on the lawn plan so far as that can be reasonably and consistently accomplished.

* * *

We show in this connection some interesting views of Forest Home and its monuments taken especially for PARK AND CEMETERY by E. T. Hindman, the Milwaukee monument photographer.

The Blatz mausoleum seen in one of our illustrations is one of the most elaborate structures of the kind in the country. It was designed by Architect Charles A. Fink and erected in 1895 by Lohr & Boyle, then operating under the firm name of the Milwaukee Monument Co.

The vine-covered wall that may be seen in the background of the water view shown is a unique piece of rock work. It is designed to represent the face of a cliff, along the base of which the stream winds into the lake. In the construction of this Superintendent Currie drew on his imagination to the extent of trying to make it appear that the stream had in course of

this rock work is constructed is weather-worn limestone, all carefully selected, many of the stones being very interesting specimens because of their shapes and perforations. This stone was obtained at Iron Ridge, Wis., about fifty miles north of Milwaukee.

The entrance and office building at Forest Home are not only interesting in themselves as well planned and handsomely built structures, but constitute a valuable lesson in the relative arrangement of entrance and administration building.

It is a landscape problem of no mean importance to get the building conveniently located to the entrance and yet allow of a good landscape effect that will not be too much dominated by the building.

The building at Forest Home is set back for quite a distance from the entrance proper to the grounds. The wide, curved driveway goes some distance within the grounds before the gate is reached. The building immediately beyond the gate is well set off by the planting and is one of the finest of modern cemetery structures.

One of our pictures shows a near view of the building, and another shows more clearly the location of the building with reference to the entrance or driveway.

The building is located about 30 feet inside of the fence. The view is from the outside, showing a good view of the approach from the street, the gates being located approximately 200 feet from the street line.

COURT DECISION ON PROHIBITING INTERMENTS

(Continued.)

S. W. Henderson testified that he owns property on Main street, near the corner of Twenty-ninth, on which he has conducted a grocery for twenty-five years, and who owns property on Twenty-ninth street immediately opposite the cemetery, on which he has lived for several years, and who was also a signer of both the petitions already mentioned, although he had forgotten the fact, and at whose store meetings upon the subject were held, although he had also forgotten that, and who has been trying to get the cemetery closed up in order to get the streets improved, "smelt things." He said: "Why, just the other day I thought I smelled something. I often question myself where that smell comes from." He thought "it must be some sewers, or something like that, or somebody must be opening a vault, or something like that"; he thought "somebody was opening a vault or cleaning one out"; he had been smelling things "for six or seven years"; that it did not seem to him like the smell of the packing houses. He said the smell came from the north and northeast.

A. F. Lawrence, who had lived in Union Cemetery for five years, and still lives there, and who had a quarrel with the superintendent, worked in the cemetery for a month about four years ago. He had "noticed a smell or scent whenever it is damp." But he still continues to live in the cemetery and proposes to stay there.

L. S. Bender worked in Union Cemetery three years ago for about three months, digging graves. When asked if he observed a stench or smell in the graveyard while he was working there, he said: "Well, it seemed as though at times I would, yes." When asked if the smell was like the smell of the packing houses, he said he didn't "know as it was—something similar to, you might say, in some ways; in some ways it was and in some ways it was not."

"Joe" Johnson, an attorney, also went through the cemetery twice; one time with Mr. Ward and Mr. Jesserich and others—in August, before the trial. He says when they went through "there were noxious smells."

He lived for twenty-four years at 2917 Baltimore avenue. This is one street west of Main street. He moved away October 12, 1910. He said his wife was sick all the time they lived there, and since they moved away she had gained fifteen pounds in six months. He said some of his neighbors had been sick for years, and they laid it to the cemetery. He did not know whether that was true or not.

C. K. Bowen, a photographer, took a number of photographs in Union Cemetery, as evidenced by Exhibits 22 to 26, inclusive, in evidence. In doing so he was over the cemetery grounds and knows that the photographs correctly portray conditions in said cemetery. He saw a portion of a cof-

fin in the cemetery grounds, as well as a collection of human bones collected from the surface thereof; saw pools of water, over which there was scum and green stuff which had a terrible odor; and on two acres of the cemetery the graves and headstones thereof were as close together as could be—seemed to be touching one another. Some headstones were decayed, others down on the ground; some of the graves were sunken a foot or two, and in at least a half dozen places in the potter's field, rubbish, tombstones and headboards were piled up; that part of the cemetery in the district of the potter's field and west of it showed no evidence of care.

That he took the photographs, introduced in evidence, showing the physical condition of the cemetery. That he had been a witness for the city in a thousand cases, in which his works of art were used as evidence (and from this we suppose he acquired the name "Artist" Bowen, by which name he is referred to many times throughout the record).

That he was instructed "to make the situation the best of my ability," and that he obeyed instructions. That he furnished one of his assistants with a long weed, to resemble a fishing pole, to which he tied a string, and placed said assistant at the edge of one of the pools in the attitude of fishing, which is shown by one of the photographs offered in evidence.

That in order to please his employer he arranged the headstones to suit his own notions, which appears in one of the pictures.

That he "kicked" out of the ground a piece of a board which was said to have once been part of a casket, which was done to make it appear in the picture.

That he gathered together a small collection of what were said to be human bones, which were offered in evidence; that he picked them out of the ground with a little stick.

Dr. Le Roy Dibble, a physician and surgeon with forty-two years' practice, had been one of the sanitary officers of the state of Michigan and a prison inspector for nine years, and had been twice through Union Cemetery; saw human bones scattered on top of the ground. He observed the drainage of the cemetery and the pools which being filled with germs, might be carried by mosquitoes, rats and mice, and be the cause of disease and distributed over a considerable area, and with conditions as described in the potter's field, if the ground became thoroughly saturated, would be a danger always, and that the existence of stench and smells was a warning of an unsanitary condition and a danger.

Dr. Walter M. Cross, a physician and surgeon and a chemist by profession, is the city chemist of Kansas City. He testified that pools of water covered with a scum might be the cause of the spread of dis-

ease; that disease germs might be spread by vermin, flies, rats, etc.; that conditions observed in the potter's field, considering the drainage of the cemetery, is an unsanitary condition and the probable source of the spread of disease; that germs which have once destroyed human life are probably thousands of times more virulent than before.

Dr. Carl A. Jackson, a physician and surgeon, was a member of the lower house of the Common Council of Kansas City and chairman of the Sanitary and Hospital Committee. He testified that germs are carried by vermin and mosquitoes.

J. D. Bateman lived near the cemetery and had been in the cemetery. A house and barn appeared therein. Hay was stacked within the cemetery. Grass had grown long enough to be cut for hay. He made measurements of distances to top of caskets from the surface of the ground which averaged from three feet to sixteen inches.

Joseph S. Chick, Jr., whose father came to Kansas City in 1836, and had buried many members of his family in Union Cemetery, assisted in moving bodies of the family from the cemetery and said that the caskets were very muddy.

A. F. Lawrence testified for defendants that he had been living in the cemetery for five years and worked there for a time, and that in digging graves in the potter's field they sometimes found bones in the bottom of the newly dug graves.

H. A. Close testified for defendants that he had been a grave digger in the cemetery for more than five years and still worked there; said that in the potter's field they struck human bones once in a while when digging graves, and in such cases the bones so found were always put in the bottom of the graves before the new coffin was put in. A place was excavated to accommodate them. He never saw any human bones there on the surface; only saw them where he was digging, and then he put them back.

L. S. Bender, another witness for the defendants, who worked in the Union Cemetery as grave digger about three years before the trial, testified that when in digging graves they found bones, they collected them together, then dug down a little deeper at once end of the grave and put them in that excavation and put the new box on top. This was in the potter's field. But the pieces of coffin so found are not reburied—they are burned.

Defendants also introduced evidence whose purpose was to prove that the cemetery did not receive from its owners proper attention; that it was not as trim and neat as it should have been, and that its appearance suffered from want of proper care. One witness testified that he was there in March, and the grass looked as if it had not been cut for some time. He had only been in the cemetery twice.

Another witness said that in the potter's field the grass looked as though it had not been taken care of through the entire summer. He was one of the party who went into the cemetery and drove a sharp steel rod into the graves, to ascertain how deep they were buried.

Henderson, another witness, whose testimony on other points has already been referred to, described everything as "wild looking, in a wild, chaotic condition"; "I don't think they spent five cents a day on it." His visit was on the Monday before the trial began. Henderson saw pools of water there, "and weeds and reeds and brush, and everything like that," in the north end of the cemetery, and he saw green scum.

Such additional evidence as may be necessary for a proper presentation of the law and facts of the case will be mentioned in connection therewith, in the opinion which is to follow.

OPINION.

I.

There are many questions of fact and propositions of law presented and ably discussed by counsel for the respective parties to this suit; but after all, when reduced to their final analysis, they tender a simple controverted fact for determination, and that is: Is the ordinance which was duly enacted by the Common Council and approved by the Mayor of Kansas City, on July 14, 1910, prohibiting further burial within the territory embraced within the terms of that ordinance, reasonable or unreasonable?

If that question is to be answered in the affirmative, then it will become the duty of the court to hold that said ordinance is valid and binding upon all parties concerned, while upon the other hand, if we should answer that question in the negative, then it would equally become the duty of the court to hold said ordinance invalid and inoperative.

Preliminary to a disposition of that question it becomes necessary for the court to determine a certain legal proposition interposed by counsel for defendants, as a barrier against the right or authority of the court to inquire into the question of the reasonableness or unreasonableness of the ordinance in question.

Counsel for defendants insist that the law conclusively presumes that the Common Council of Kansas City, which is the legislative body thereof, fully investigated the conditions that existed in and about the Union Cemetery, and the effect those conditions had upon the public and the health of the city; that it must have found that further burials in said cemetery were detrimental to the public health, and that in the exercise of the police power of the city it enacted said ordinance to preserve the health and well-being of the city.

In support of this insistence we are cited to several provisions of the city charter

and adjudged cases from this and other states.

Without stopping to review those authorities, it is sufficient to say that whatever may be the rule in other states in regard to that matter, it is fully settled, and that it is no longer an open question in this state, that the courts hereof have the undoubted right to inquire into the reasonableness of any ordinances, though duly enacted, by any and all cities of this state.

This question was ably presented to this court *en banc*, in the case of the American Tobacco Company et al. vs. The City of St. Louis et al., not yet reported, involving the reasonableness of an ordinance separating the railroad and street crossing at Tower Grove Park and other points in that vicinity.

RAILWAY GARDENING ASSOCIATION CONVENTION.

The eighth annual convention of the Railway Gardening Association will be held in New York City, August 11 to 14. A complete program has been prepared and many interesting and instructive letters pertaining to this work will be read and discussed.

The headquarters while in New York will be at the Hotel Breslin, Broadway and Twenty-ninth street. The management has given us the use of their convention hall for the meetings and very reasonable rates for rooms.

Partial Program.

TUESDAY, AUGUST 11.

10:00 a. m. to 12:30 p. m.—Opening meeting.

2:30 p. m. to 5:00 p. m.—Business meeting. If necessary, part of the evening will be devoted to business meeting.

WEDNESDAY, AUGUST 12.

9:00 a. m. to 12:00 m.—Business meeting.

2:00 p. m. to 5:00 p. m.—Business meeting.

Evening—Go as you please.

PROPOSED FAIRMOUNT PARK MEMORIALS.

The Fairmount Park Art Association, of Philadelphia, in its last annual report announces that by the will of Mrs. Ellen Phillips Samuel, who died October 1, 1913, the association became the legatee to \$500,000 to erect on the east bank of the Schuylkill River, at distances of 100 feet apart, on high granite pedestals of uniform

ity. After a careful review of all the authorities the court unanimously held, in conformity to its previous rulings, that the courts of this state possess the power and authority to investigate and pass upon the reasonableness of any ordinance enacted by any city, town or village in this state.

Counsel for defendants have not shown or suggested any good reason why the ruling of this court in the case mentioned, which is in harmony with the previous rulings, should be departed from or changed. Nor have we, in the investigation of this question anew, discovered any substantial reason which would justify a departure from that ruling.

We, therefore, rule this insistence against defendants.

(To be continued.)

THURSDAY, AUGUST 13.

9:00 a. m.—Business meeting, election of officers, etc.

Adjournment.

1:00 p. m.—Trip on Central Railroad of New Jersey to Somerville and Dukes Farms and Gardens, stopping en route to have photo of party taken by Mr. Morris, at Fanwood Station.

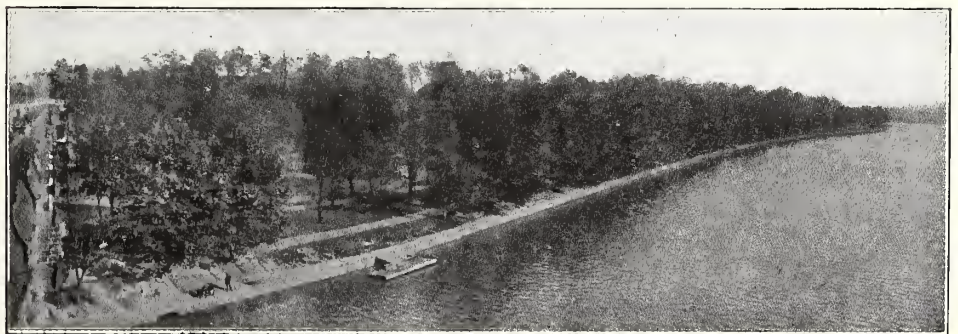
Each member of the party will be presented with copy of photos with compliments of Central Railroad of New Jersey.

FRIDAY, AUGUST 14.

9:00 a. m.—Trip to Ocean Grove via Sandy Hook boats and train, compliments of Central Railroad of New Jersey.

Afternoon—To Coney Island or suit individual tastes.

Members are requested to kindly advise President F. W. Vail, of Dunellin, N. J., at the earliest possible moment as to whether they are going to attend so that he can complete the program for all business and social features.



EAST BANK OF SCHUYLKILL BELOW GIRARD AV. BRIDGE, PHILADELPHIA; SITE OF PROPOSED ELLEN PHILLIPS SAMUEL MEMORIAL.

A. A. C. S. CONVENTION IN ST. LOUIS.

Editor PARK AND CEMETERY: I want to let you know for the next issue of PARK AND CEMETERY what the Convention Committee has decided on for the next convention in St. Louis. The convention will be held on the 6th, 7th and 8th of October, at the Planters' Hotel. As that week will be the Festival Week in St. Louis, there will be a large number of visitors in the city to see the Veiled Prophets procession and to attend the Veiled Prophets ball at night. It will be necessary for our members to make early application for rooms, etc.

MATTHEW P. BRAZILL,
Chairman Convention Committee.

St. Louis, Mo.



PLANTERS' HOTEL, ST. LOUIS.

ANNUAL CONVENTION OF PARK SUPERINTENDENTS.

The sixteenth annual convention of the American Association of Park Superintendents will be held at Newburgh and New York City, N. Y., August 24, 25, 26 and 27, 1914. Headquarters: Newburgh, Palatine Hotel; New York City, Hotel Astor. The program:

MONDAY, AUGUST 24.

3 p. m.—Meeting of the Executive Board. Registration.

7:30 p. m.—Annual business meeting at headquarters, Palatine Hotel, Newburgh,

N. Y. Address of welcome, Mayor of Newburgh; addresses by the Park Commissioners of Newburgh; response, President H. S. Richards. A brief sketch of the life and works of Mr. Andrew Jackson Downing, by Prof. F. A. Waugh. "The Preservation of Natural Woodlands Under Park Conditions," illustrated lecture and discussion led by Ogelsby Paul, landscape gardener, Fairmount Park, Philadelphia, Pa.

TUESDAY, AUGUST 25.

7 to 10 a. m.—Visit to Mt. Beacon, one

of the highest points in the vicinity and famous in Revolutionary times.

10 a. m.—Start by auto from headquarters at Newburgh to see the important points of interest in the city, visit the Downing homes, Washington's headquarters, and Newburgh parks and playgrounds; thence through Tuxedo Valley to Tuxedo Park. The association will then be entertained at luncheon by Mrs. E. H. Harriman on her estate at Arden. Return to Newburgh early in the evening.

WEDNESDAY, AUGUST 26.

10 a. m.—Through the courtesy of Hon. George W. Perkins, president of the Interstate Park Commission, the association will leave Newburgh by boat on a trip down the Hudson River to West Point, stopping at the different points along the Interstate Park river front, where the members and their guests will be conveyed through the Interstate Park. The trip by boat down the Hudson will then be continued, viewing the Palisades, the New York river front and the New York bay, arriving in New York City early in the evening.

THURSDAY, AUGUST 27.

9 a. m.—Meet at headquarters, Hotel Astor, New York City. Address of welcome, Mayor of the City of New York; address, Hon. Cabot Ward, president of New York Park Board; response, President H. S. Richards.

THE BOSTON GIANT PARK SPRINKLER

Designed for watering large areas, such as Parks and Cemeteries, Golf Courses, Baseball Grounds, etc.

Water spread in a fine, dense rain-like spray over an area having a diameter of from 80 to 150 feet, at 30 lbs. pressure per square inch.

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Prevents Dust—*



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Experience with Tarvia at Oakwoods—

For a number of years "Tarvia A" has been used in Oakwoods Cemetery, Chicago, to preserve the road surface against the increasing automobile traffic, for which ordinary macadam was proving insufficient.

The good results shown during several years of wear prompted the adoption of the heavier and more thorough "Tarvia X" application in 1911. The results shown at the end of a year are described in the following letter:

Chicago, November 9, 1912.
"Tarvia X" used during the season of 1911 has shown favorable results; in fact, it is the most practical treatment thus far found on our roads. We have extended its use to additional driveways during the present season and contemplate further applications next year.

(Signed) EDWARD G. CARTER, Supt. Oakwoods Cemetery Assn.

The best testimonial to any product is the repeated orders. The most striking feature of the Tarvia business is the fact that, when a thorough test of Tarvia is made in a given locality, orders keep coming every year thereafter, in increasing quantities. Many towns, after experimenting with various road preservatives, have settled down to the steady use of Tarvia to the exclusion of all other dust layers and road binders.

Tarvia is a dense, viscid coal tar product which forms a plastic matrix around the stone and prevents raveling by automobiles and water. Its cost is so low as to be more than repaid by the saving in maintenance.

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Automobile trip through parts of the park systems of Manhattan, the Bronx and Brooklyn, in cars kindly furnished by the City of New York and the Fifth Avenue Stage Company. Central Park, Riverside Drive, Van Cortlandt Park, New York Botanical Garden and the New York Zoological Park will be visited. At the last named

place luncheon will be served to the convention as guests of the New York Zoological Society, and the park and its collections will be briefly inspected. Then trip through eastern Manhattan to Prospect Park, Brooklyn, various small parks and Ocean Parkway, terminating at Coney Island.

CEMETERY NOTES

Royalties from a mine north of Fairview cemetery, Joplin, Mo., on land owned by the city, will be used hereafter in improving Fairview cemetery instead of being placed in the general revenue fund. An ordinance which was passed by the city commission provides that all revenue derived from the cemetery land will be placed in the cemetery fund. In the last eight or ten years royalties received by the city totaled about \$40,000, which has been used to promote the general welfare of Joplin. The ordinance was introduced by Commissioner Charles A. Patterson, who now is directing improvements at the cemetery.

Later the company filed a motion to vacate the receivership, claiming that the appointment of receiver was irregular and without notice to counsel for the company.

The Woodlawn Cemetery Association, of Winona, Minn., reports the gift of legacies from the estates of Mr. and Mrs. John F. Martin and Colonel and Mrs. A. K. P. Crockett, increasing the endowment fund by \$11,400. This brings the endowment fund up to a total of \$71,000.

Judge Foell has refused to appoint a receiver for the "Perpetual Care Fund" of the Rosehill Cemetery Company, Chicago, as that can be done "only upon the apprehension of future injuries and that apprehension is not present as the Chicago Title and Trust Company has absolute control of the management of the perpetual care fund, and there can be no possible element of danger."

New Cemeteries and Improvements.

The trustees of Oakland Cemetery, Petersburg, Ill., have purchased four acres of ground adjoining the cemetery on the south, so that they can have an entrance on the level. The new entrances and driveways, which are already being graded, will enhance the general appearance of this already beautiful cemetery.

The Cemetery Improvement Company has been incorporated at Hot Springs, Ark., with a capital of \$3,000. W. E. Jones is president; J. B. Cravens, vice-president and treasurer, and F. L. Stratton, secretary.

The Cemetery Association of Henry, Ill., is surveying and mapping the ten acres

west of the cemetery grounds. The cemetery has the reputation of being one of the best kept and managed in that part of the country.

At a recent meeting of the Woman's Club at Marion, Ill., the chief subject of discussion was the needs of the city cemeteries. The club will urge the city to appoint a salaried sexton to put and keep the cemeteries in proper condition.

The Ebenezer Cemetery Association was chartered in Union Township, Miami County, Ind., without capital. The directors are Samuel F. Robbins, Elmer Fites, Arthur J. Ward.

A contract has been let to P. H. Tiernan for improving the driveways in Oakwood Cemetery, Macomb, Ill. Cement gutters will replace the brick ones and the driveway will be excavated and filled with crushed stone.

The women of the Rogers, Tex., Cemetery Association have inaugurated a campaign for the purpose of raising funds and arousing interest to clean up the cemetery.

The Hill Crest Cemetery Association has been incorporated at Cartersville, Ill., with a capital of \$2,500, by W. H. Riffin, G. W. Bevard and Leon Bevard.

At Oskaloosa, Ia., the Rose Hill Cemetery Association was recently incorporated for fifty years, to "establish and maintain a cemetery." It has no capital stock. Directors are: Fannie McKenna, president; Mayme Slocum, secretary; W. S. Currier, I. B. Musgrove and Almer James.

It is expected that the contract for the new mortuary chapel in Oakwood Cemetery, Austin, Tex., will be let by July 1. The design is an artistic one with castellated tower and walls of undressed rock laid in broken ashler fashion. The plans provide for a chapel, receiving vault, sexton's room and other essentials of a modern cemetery building. It will cost \$5,000.

The Oakridge Cemetery Association, of Danville, Ill., is preparing to improve that cemetery by building a fence the entire width of the cemetery. William Jones, the president of the association, will advertise for bids.

The Cemetery Association and the women interested in the improvement of the Alton, Ill., city cemetery are planning to raise

money by subscriptions from lot owners for making permanent improvements. It is said that several thousands of dollars will be needed at the outset, after which a smaller sum will suffice to maintain the annual expenses for upkeep of improvements. Fences and roads are to be fixed and the grounds generally beautified.

From the Cemetery Reports.

The sixtieth annual report of the commissioners of Pine Grove Cemetery, Lynn, Mass., has just been received. Of the total receipts of \$37,971.48 it will be noted that \$10,367.73 comes from the sale of lots, \$3,519.00 from interments, and \$9,493.21 from interest on the perpetual care fund. The perpetual care fund amounted to \$240,364.78 at the beginning of the year and \$248,018.43 at the end of the year. During the year there have been laid 2,507 feet of drain pipe, in connection with which three large and eight small catch basins have been built. In addition to this, 4,866 linear feet of concrete gutter have been laid.

MORE OR LESS PERSONAL.

The following officers have recently been elected by cemetery organizations:

Palmyra Cemetery Association, Dixon, Ill.: E. H. Rickard, president; Charles Lawton, secretary and treasurer; L. W. Mitchell, member of board for the next five years.

Rosehill Cemetery Association, Chicago: A. R. Marriott, vice-president of the Chicago Title & Trust Co., and Justin M. Dall, secretary of the same company, were chosen to fill two vacant places on the Board of Managers of the cemetery, while F. G. Gardner, trust officer of the title and trust company, was chosen secretary and treasurer of the cemetery association, to fill the vacancy left by the resignation of C. B. Munday, the Lorimer bank financier.

Oak Grove Cemetery, Jerseyville, Ill.: Alderman Atchison, chairman; Dr. E. L. H. Barry, secretary; Edward Nelson, treasurer; Strother Kennedy, sexton.

Seward Lutheran Cemetery Association, Joliet, Ill.: Mrs. Andrew Olson, president; Mrs. Ella Knudson, vice-president; Mrs. Bert Erickson, secretary; Mrs. Carrie Knudson, treasurer.

Manchester, Ia.: Seth Brown, Sr., president; Dr. J. W. Scott, vice-president; D. F. Young, secretary and treasurer; H. F. Arnold and F. E. Dutton, to fill two vacancies on the board.

FRONT COVER ILLUSTRATION.

The front cover illustration of this issue of PARK AND CEMETERY shows the style of iron fence erected at Albany Rural Cemetery, Albany, N. Y. This is a striking example of the substantial and attractive work turned out in the immense factories of The Stewart Iron Works Company, Cincinnati, O., who designed and built the fence in 1902.

The contract consisted of some 3,000



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IT is surprising how many Parks and Cemeteries in the western part of the United States have built and are building Greenhouses. The East will have to get up early and work late or else be passed by their Western neighbors.

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the economy of having them built by a concern who beyond all doubt knows how to build them.

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lineal feet of iron fence, 78 inches high, constructed of $\frac{3}{4}$ -inch square pickets, $2\frac{1}{2}$ -inch steel channel rail, 1-inch square line posts, with $\frac{3}{4}$ -inch square braces, and their patent adjustable steel and wrought malleable iron foundation base set 4 feet in the ground.

It will be seen from these specifications that the Albany Rural Cemetery Association appreciated not only the importance of building a fence that would add to the attractiveness of the cemetery, but one that would afford the necessary protection and give years of satisfactory service.

Albany Rural Cemetery is one of the most beautiful modern cemeteries in the state, well laid out and carefully kept. Its superintendent and directors are thoroughly alive, wide-awake business men who are always abreast of the times and pride themselves on keeping Albany Rural Cemetery in the foremost ranks of the state's model burying ground. That they were early interested in this great movement sweeping through the country, to protect and beautify the cemeteries by erecting suitably designed iron fence, is indicative of their progressiveness and foresight into the future.

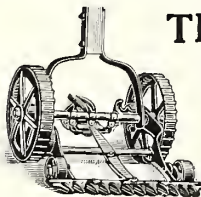
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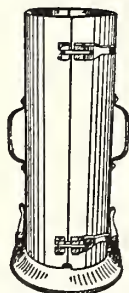


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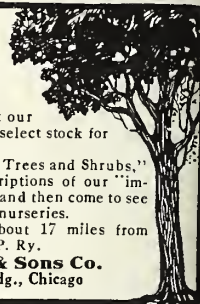
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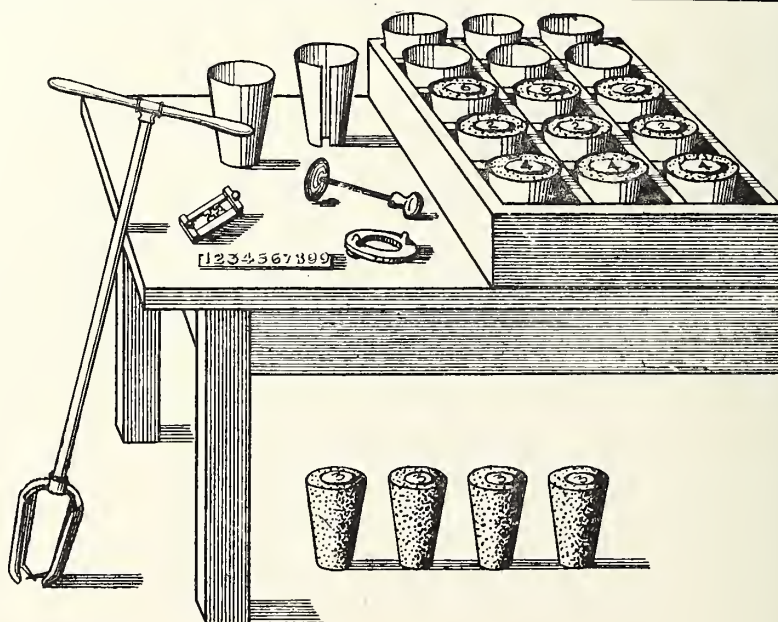
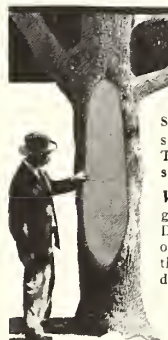
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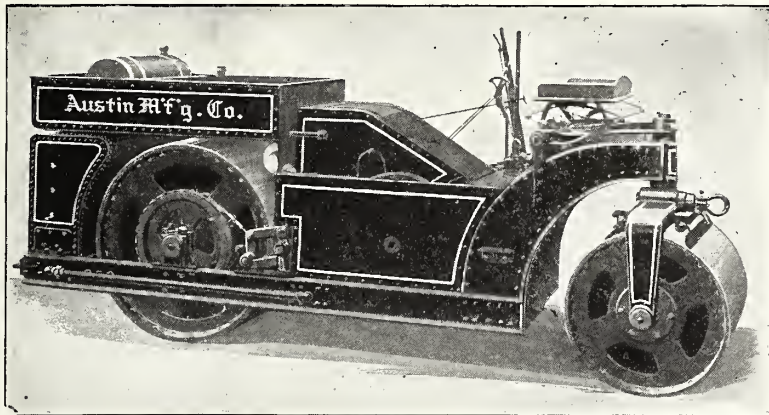
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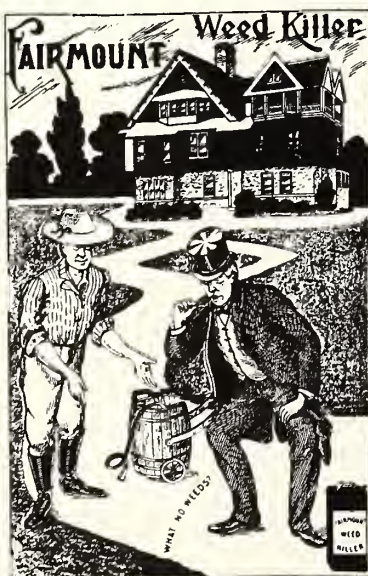
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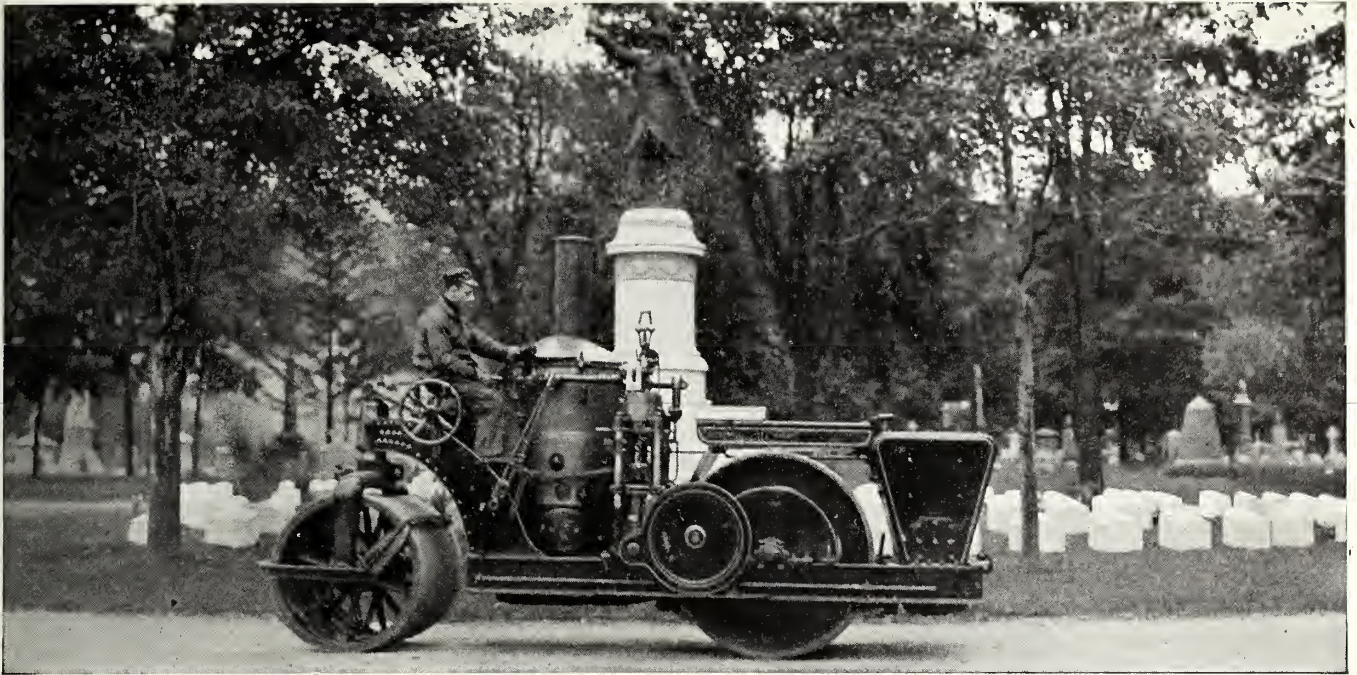
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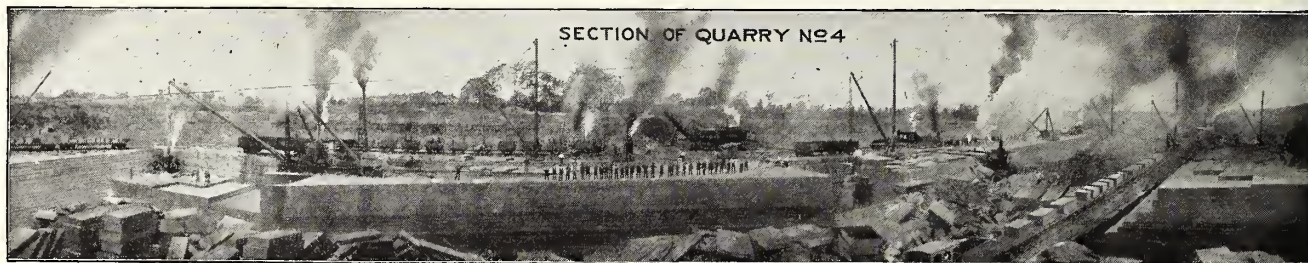
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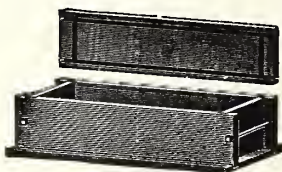
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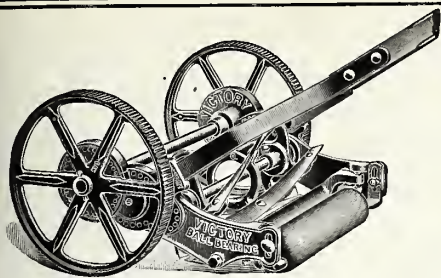
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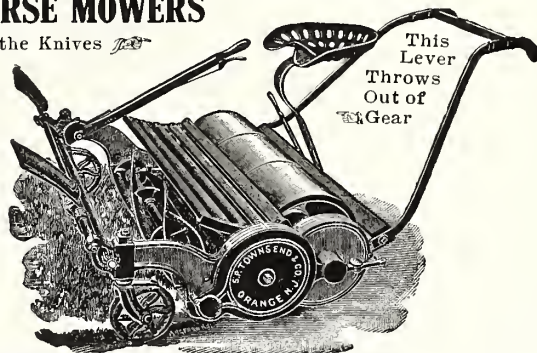
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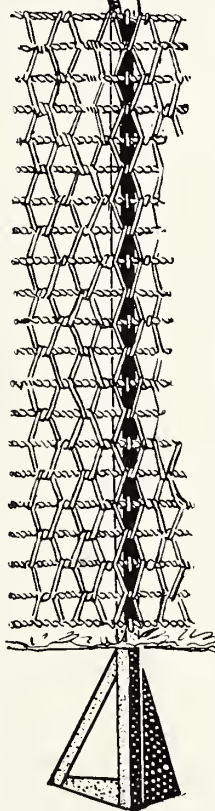
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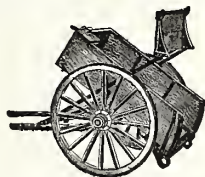


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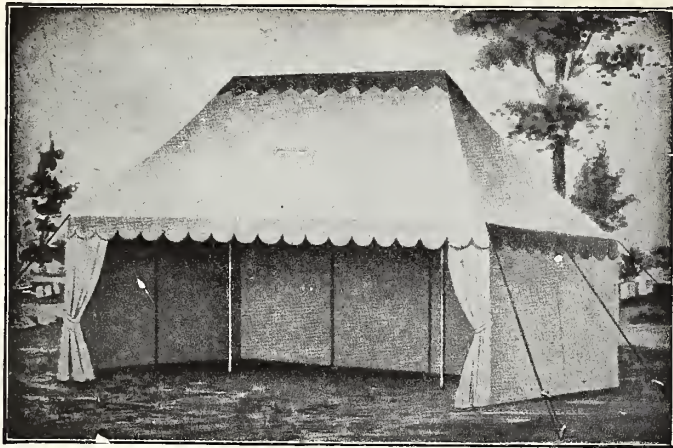
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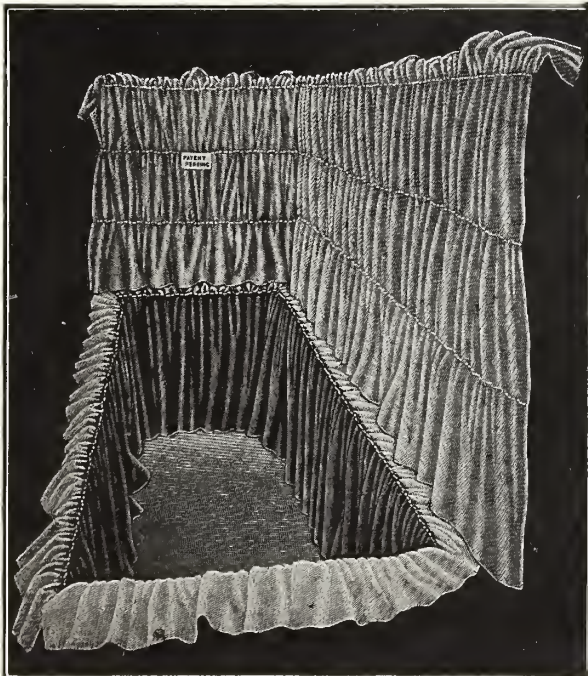


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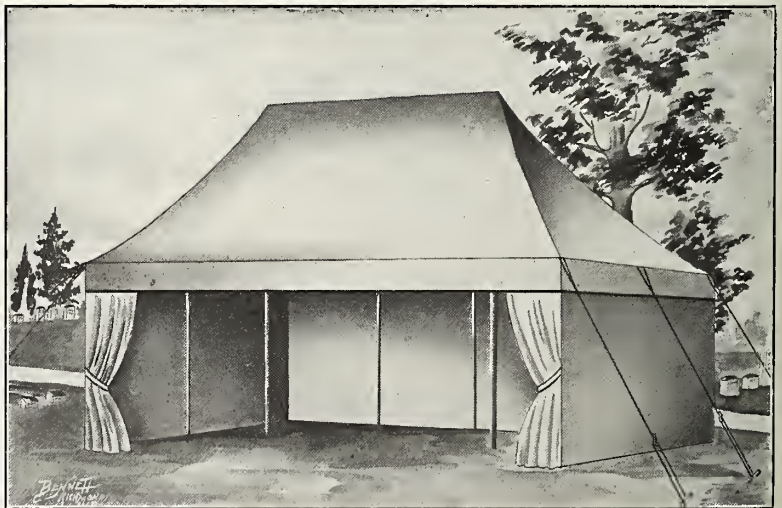


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Vol. XXIV., No. 6

AUGUST, 1914

SPECIAL FEATURES IN THIS ISSUE

Civic Awakening in Ft. Worth—Boulevard Building in Seattle—Albany
Parks—Improving Vegetation in Boston Common—Court Decision
on Prohibiting Interments—Modern Bituminous Road Construction.



A MODERN DESIGN OF IRON FENCE FOR PARKS AND PLAYGROUNDS.
Recent installation of The Stewart Iron Works Co., Cincinnati, O.
See Page 205.

Fifty Years Ago

the American cemetery-builder was planning for convenience and economy. It was not often that he gave any thought to artistic arrangement. Nor was it customary to make any provision for the care of the grounds.

In the modern cemetery the order is reversed. The great demand is for a beautiful setting. Economy and convenience have to take second place.

The upper picture shows you the type of neglected graveyard that is fast passing away. At the bottom of the page is a view in Woodlawn Cemetery, New York City. The old spire monument was put up in 1869. The Wolcott Memorial was erected in 1906. Both are Vermont marble and both are in excellent condition.



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The LITTLE WONDER Concrete Mixer we bought in 1911 has been doing good work ever since, and has lifted our concrete work from a drag to a satisfaction. After being idle during the rough winter the machine started off good as new.

A. L. SMITH,
Treasurer West Laurel Hill Cemetery Co.,
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I find the LITTLE WONDER Concrete Mixer all you claim for it. It is especially suited to our kind of construction.

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JAMES Y. CRAIG,
Supt. Forest Lawn Cemetery,
Omaha, Neb.

The LITTLE WONDER Concrete Mixer works elegantly.

J. T. YATES,
Supt. and Treas. Spring Hill Cemetery,
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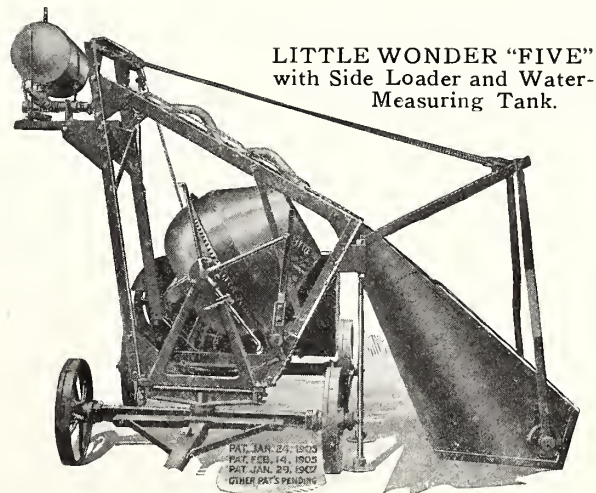
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make these improvements possible at low cost. You can save 50 cents per cubic yard over hand work and do it better. They insure perfect mixing and uniformity of strength and appearance. With them you can build concrete pavilions, peristyles, bridges, foundations for monuments, mausoleums, drives, walks, curbs, etc. With a set of molds you can make lot-markers, posts, burial vaults, etc. The LITTLE WONDER "FIVE" pays for itself several times over in one season and is making money besides in many cemeteries.

When the machine is used **without** Side Loader the drum is charged on one side, tilted and discharged on the other into barrows or direct into forms. When the Side Loader is used one batch is mixed while the following batch is being loaded. The drum has a very wide mouth. The consistency of the mix is easily regulated. The drum will not clog, and after use is easily cleaned.

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EDITORIAL

AUGUST, 1914

VOL. XXIV No. 6

Monterey Pine in New Zealand

The United States Forest Service issued a recent bulletin founded upon information derived from the *Journal of Agriculture* of New Zealand which creates a great deal of surprise amongst the Foresters of this country. The *Journal* makes the statement that "Monterey pine is by far the most valuable and profitable timber tree that can be planted in New Zealand." While this pine is well known in Southern California and while it has a comparatively rapid growth, Foresters have regarded it as practically valueless for timber, although it has been frequently planted to serve as a wind shield for orange groves.

The bulletin says: "The reports of its behavior in New Zealand, however, seem to make a further investigation of its value in this country well worth while. In view of the extraordinarily rapid growth which the tree has made in their country, New Zealanders have given it the common name of 'remarkable pine,' and from the figures reported by the New Zealand department

of agriculture, industry, and commerce, this name seems to be well merited. The claims for Monterey pine are based on the phenomenal growth which it has made in plantations and the many uses to which the wood seems adapted.

"In one plantation, for example, in which the trees varied from 26 to 29 years old, one tree gave a yield of 1,400 board feet of saw timber and the average yield of the plantation was approximately 100,000 board feet for each acre. White pine, the tree best adapted to forest management in the northeastern United States, will scarcely yield more than 20,000 board feet per acre at this age. Loblolly pine, the most rapid-growing pine of the southeast, makes not more than 16,000 board feet per acre in equal length of time. Another 27-year-old plantation of Monterey pine in New Zealand yielded 75,000 board feet of saw timber and 60 cords of fire wood per acre, yet both of these plantations were on pure sand not suitable for farming purposes."

National Park Progress

Nearly 17,000 acres have just been added by act of Congress to the Caribou National Forest, Idaho. This is one of the first of such additions through Congressional action, and is the largest so far made by direct legislation. Those who have followed the national forest movement in this country will recall that most of the forests have been created through Presidential proclamation, which set aside, for timber growing or for water protection, certain areas of the public domain. In March, 1907, however, Congress passed a law that no further additions should be made to the national forest areas in the states of Colorado, Idaho, Montana,

Oregon, Washington and Wyoming, except through Congressional action. Since July, 1909, residents of the city of Montpelier, Idaho, have been petitioning to have this 17,000 acres added to the Caribou National Forest, because the area includes the watershed of the stream which furnishes the city's water supply. Not being within a national forest, the tract was given over to unregulated grazing and other usages which resulted in stream pollution and became a serious menace to health. The citizens of Montpelier, at several times subsequent to their first efforts in 1909, renewed their petition, and the act just passed represents the successful outcome of their efforts.

Soil Fertility and Forest Fires

A definite relation between the amount of humus, or vegetable matter in the soil, and its crop-producing power as shown by yields of corn, is given in figures just issued by the Department of Agriculture. The department, therefore, advocates the use of various methods to introduce the required humus into the soil. Experts of the forest service state that the soils of the whole country, and particularly of the South, have lost, and are losing, immense amounts of this source of soil fertility through forest fires which apparently do little immediate damage, but rob the

soil of accumulations of humus. In many parts of the South land is being cleared for farming, and where such forest land has not been burned there is a large percentage of vegetable matter, which provides considerable fertility and a good texture. Moreover, this soil has a greater capacity to absorb and retain moisture, and thus is less likely to be washed and gullied under heavy rains. For these reasons, leaving out of account the damage to standing timber, the department's authorities are agreed that fire should be rigidly kept out of woodlands.

Editorial Notes

The annual capacity of the forest nurseries of the Government is about twenty-five million young trees.

Cornell University recently dedicated a forestry building in connection with the State College of Agriculture.

The forest service has been requested to co-operate with the port authorities of Coos Bay, Washington, in planting to control shifting sand dunes.

The agricultural experiment station at Pullman, Washington, is establishing an aboretum in which it is proposed to grow a group of each of the important timber trees of the temperate zone.

Students of the Oregon Agricultural College are working at the forest nursery on the Siuslaw forest. The arrangement is said

to be mutually satisfactory, since the students gain experience in forest nursery practice and their assistance lowers the cost of nursery work.

The city of Tacoma, Wash., has entered into a co-operative agreement with the forest service for the protection of the source of water supply, the watershed of the Green River, which lies within the Rainier National Forest. The two agencies, working together, will protect this stream from the results of forest destruction by fire or by other agencies.

The New York State forest nurseries have a capacity of twenty-eight million young trees a year.

Approximately 750 acres on the Oregon National Forest were planted with young trees this spring.



SITE OF ARNOLD PARK, FORT WORTH, BEFORE.



ARNOLD PARK, FORT WORTH, AFTER THE IMPROVEMENT.

THE CIVIC AWAKENING OF FORT WORTH, TEXAS

By Geo. E. Vinnedge, Supt.

Fort Worth, Texas, did not fully awaken to the need and value of public parks until 1909. In that year the city charter was amended to include provision for the appointment of a Board of Park Commissioners and the levying of a special tax for the purpose of creating a park fund. The first Board of Commissioners was appointed in April, 1909, and after going

At this time the public park area was thirty-three acres and was under the control of the Federation of Women's Clubs. The Federation, however, had no funds to expend for this purpose and the so-called parks were practically unimproved and very few of the citizens visited or even knew there were any public parks.

The park fund amounted to \$42,000 the first year, \$50,000 the second year and \$55,000 the third year. With this money the Board of Commissioners has purchased 269 acres of property in nineteen parcels varying in size from city blocks to 75-acre tracts. A force of twenty men is regularly employed, thousands of trees, shrubs and perennial plants have been planted, three streets aggregating one mile in length have been parked down the center and the parkways planted with trees, shrubbery and grass; two and one-half miles of city streets have been uniformly planted with trees, one-third of a mile of bitulithic pavement has been built around one of the block parks, and concrete curbing has been

placed around almost all of the other parks bordering upon the city streets.

SPECIAL LAWS OF TEXAS GRANTING CHARTER TO FORT WORTH. CHAPTER V.

Section 1. As soon as practicable after the adoption of this charter on the fourth Tuesday in April, 1909, and biennially thereafter, the Mayor shall appoint three qualified voters of the city of Fort Worth, without respect to their political affiliations, subject to confirmation by the Board of Commissioners, who shall, with the Commissioner of



NEW PARKWAYS, FORT WORTH.

over the ground carefully, Geo. E. Kessler, the noted landscape architect, was employed to make a city plan.



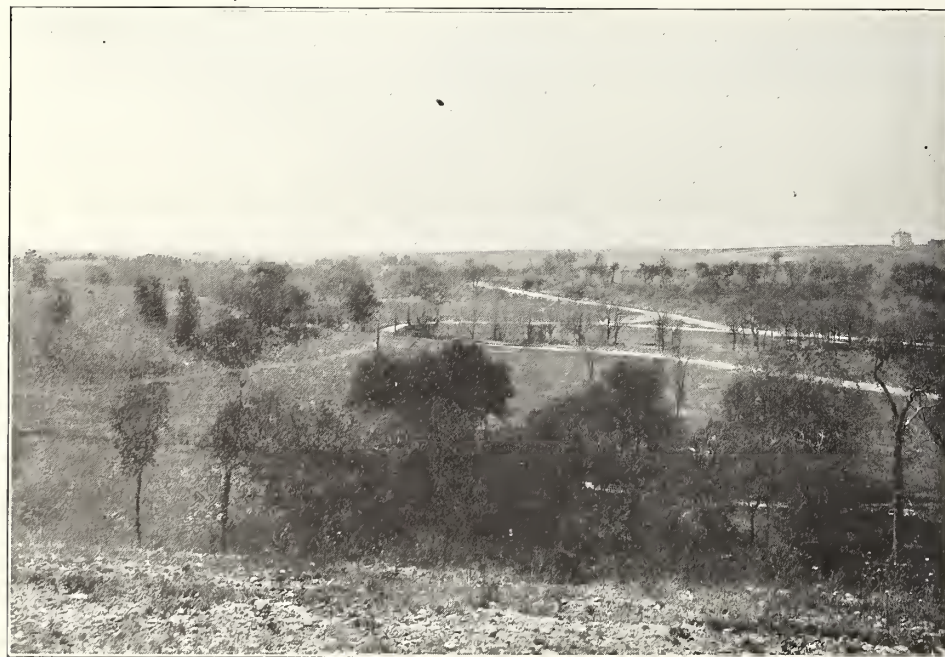
BORDER IN HYDE PARK, FT. WORTH.

Streets and Public Grounds, constitute the Park Board of said City, of which said Commissioner shall be Chairman, and who shall serve for a period of two years and until their successors are appointed and qualified. Said Park Board shall have exclusive control and management and maintenance of the Public Parks of the City of Ft. Worth, and shall have the management and control of the beautifying and parking of any ground, street or boulevard or part thereof, or any cemetery belonging to said City, which the Board of Commissioners may designate to receive such improvements.

Sec. 2. Said Park Board shall have authority to acquire, by gift, or devise land in the name of the city for park purposes, and may arrange the terms of purchase, and purchase and land for park purposes.

Sec. 3. The Park Board shall adopt such rules and regulations as it may deem best for the management of the public parks of the City, and shall elect one of its members Vice-President of the Park Board and a Secretary thereof.

Sec. 4. The Board of Commissioners when levying the taxes for each fiscal year shall levy an ad valorem tax of 10 cents on each \$100 of the assessed value of all real and personal property in the city not exempt from taxation by the Constitution and laws of the State for the use and benefit of the park fund. Said tax, when collected, shall be deposited with the City Treasurer to the credit of the Park Fund, and said sum, together with all sums appropriated by the City in the Annual Budget for Park Purposes or received from other sources, shall be deposited and held by the City Treasurer in a separate account to the credit of the Park Fund, subject to the order and disbursement of the Park Board for the purposes and in accordance with the authority herein specified, and same shall be paid out upon warrants issued by



FOREST PARK, FORT WORTH.

the Park Board, signed by the President or Vice-President of said Board, and countersigned by the City Auditor and Secretary of the Park Board.

Sec. 5. The members of the Park Board shall possess the same qualifications and be subject to the same disqualifications provided by law for Commissioners of the City of Ft. Worth, and shall serve without compensation.

The Park Board may select and engage such employes as may be necessary in the up-keep and maintenance of the Parks, Parking Places and such other places over which the Park Board has jurisdiction, of the City of Ft. Worth. Their compensation shall be fixed by such Park Board and they shall be subject to removal and dismissal at the pleasure of said Board; provided, that the expense of such employment shall not exceed the revenues applicable to such purposes unless approved by the Board of Commissioners of the City of Ft. Worth.

Sec. 6. The Board of Commissioners of the City of Ft. Worth shall have authority to issue and sell bonds for the purpose of carrying out the powers herein conferred, and for the purchase and improvements of Park Grounds, Parkways and Boulevards, such bonds to be issued and sold on such terms as may be prescribed by the Board of Commissioners, and in accordance with the limitations prescribed by the laws of the said City and the Constitution of Texas.

Sec. 7. The Board of Commissioners shall have power to appropriate, purchase or condemn on such compensation duly paid, private property for the use of the City for parks, public plazas and squares and in such event the Board of Commissioners shall declare, by ordinance, the necessity for such appropriation, describing the property sought to be appropriated and stating the name and residence of the owner, if known, and if un-

known, stating that fact, and shall cause to be filed with the City Clerk a plat of the property proposed to be condemned, and such private property shall be condemned, for the use of the City for the purposes expressed in the ordinance by the same proceedings and under the same rules, so far as applicable as are now or may hereafter be provided by the General Laws of this State for the condemnation of private property for the use of railroad corporations, or in any other manner or by any other proceedings authorized by the General Laws of this State for the condemnation of private property for general use.

Sec. 8. The Board of Commissioners may, by ordinance, from time to time enlarge the authority and jurisdiction of the Park Board and confer upon it additional powers not inconsistent with the law; and it is not intended by the foregoing to fully define or limit the powers of said Park Board.

BOULEVARD BUILDING IN SEATTLE

By Roland Cotterill, Secretary.

The Green Lake park and parkway project now in course of development at Seattle is an example of a city taking advantage of an unusually attractive parking opportunity.

Green Lake is a body of water 247 acres in area, with over three miles of shore line, and, with the exception of a half mile of frontage of Woodland Park, is entirely surrounded by a well built up residence section of the city. A street railway line and commercial highway follows the shore line of the lake practically all the way around, leaving a narrow rim of land varying in width from 50 to 300 feet, between

the highway and the old shore line, which was in private ownership. This entire rim of property was acquired for park purposes, eliminating privately owned lake frontage completely, also street ends, so that the entire frontage became parking area.

A comprehensive development plan was secured from Olmsted Bros. in 1910 and its execution has been proceeding steadily since that time under the direction of Superintendent J. W. Thompson.

In order to widen the rim of land between the highway and the shore line it was decided to lower the lake about four

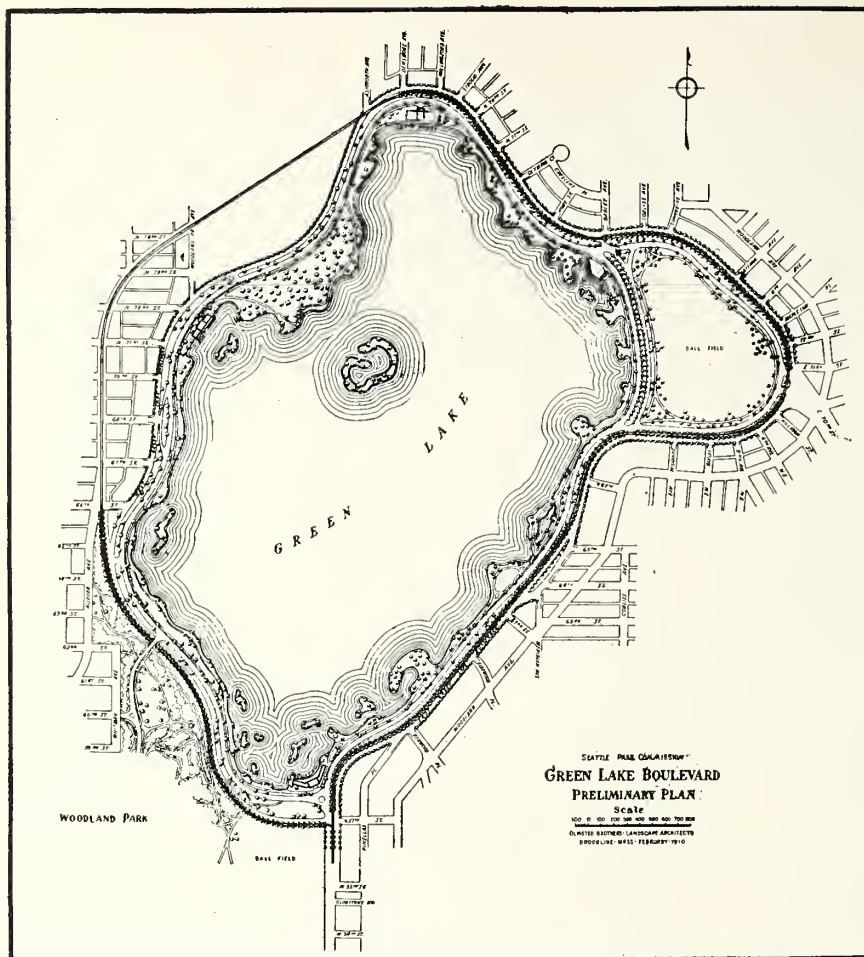
feet, thereby uncovering considerable area. This was accomplished by the installation of a 24-inch pipe line from Green Lake for a distance of approximately 4,000 feet to a brook having its outlet in Lake Washington, which is at a considerably lower level.

Following up the lowering of the lake over a mile of diking was constructed on a new shore line on the marshy side of the lake. A pile of trestle was built on the dike line, over which dirt trains operated, dumping through the trestle and thus forming the dike.

The earth for this dike was secured from a rugged tract of upland adjacent to



Lake Washington Boulevard and Mt. Baker Park



the lake, over 200,000 yards of fill being transported at a contract price of 38 cents per cubic yard, the maximum haul being a mile and a half.

Following up the diking contract, the park department forces took up the work of the adjustment and filling of the new area between the dike and the shore line.

A suction dredger with a capacity of 1,000 yards per day (two nine-hour shifts) was installed a year ago and has been working steadily ever since pumping mud from the bed of the lake and depositing same over the dike at a cost of about eight cents per cubic yard. As this back filling will require about 800,000 yards of earth, some idea of the magnitude of the project can be obtained.

Approximately \$300,000 has been expended up to this time and the completion of the plan will require the expenditure of probably \$200,000 more. The lowering of the lake and the diking and filling process has resulted in the making of over a hundred acres of new land, and Green Lake is now a lake within a park. The plan calls for a circuit drive around the lake, a series of small parks projecting into the lake, boathouses, bathhouses and extensive plantation effects, the whole forming a park feature which will be a credit to Seattle and its famous park and boulevard system,

OFFICIAL COMMUNICATIONS

H. S. RICHARDS, Chicago, President



AND CONTRIBUTIONS

J. J. LEVISON, Brooklyn, N.Y., Sec.-Treas.

RECENT WORK IN ASSOCIATION PARKS.

(Continued.)

As an item for the next PARK AND CEMETERY, would say that the Utica Park Board has installed twelve tennis courts on the new 36-acre addition to Roscoe Conkling Park, donated by T. R. Proctor last year, and these are a sight and in continual use from 5:30 a. m. to 8:15 p. m. at the present time. We need fifty courts, but it is probable we cannot add more this year.

There has also been started a new playground on the new addition. We have installed sand boxes, steel swings and teeters and expect to erect slides soon.

There has been passed by the Council a new bond issue for playground sanitariums and for the Roscoe Conkling Park addition playground improvement.

The Child Welfare Bureau is using the modern municipal bath for certain hours each week as milk depot and for holding baby clinics. I believe our park system is getting the utility idea pretty well introduced, in Utica at least. We are grading

and graveling an additional half mile of boulevard, making a total, across city, continuously of three and one-half miles.

E. M. SWIGGETT,

Utica, N. Y.

Supt. of Parks.

In answer to your inquiry of March 25 I inclose a rough outline plan of the improvement of Beaver Park, just started, and a newspaper clipping describing the plan as outlined by Arnold W. Brunner, the city planner. The rough grading and filling to prepare the athletic field site will be done this season, the structural work next year. Several smaller parks are to be extensively improved later on, and the city of Albany and the railroads entering the city are now justly engaged in improving the Hudson River front at an estimated cost of \$8,000,000. Surveys of the Hudson River, extending from Troy to several miles below the town of Hudson, have been authorized by the government, with the deepening of the river to twenty-seven feet

in view, to permit ocean going vessels to dock at Albany and Troy.

We have filtered water, and an intercepting sewer, with antiseptic terminal tanks, is under contract, to prevent river pollution.

A system of boulevards is now being outlined to connect and bring into a homogeneous plan and circulation the several parks and outlying suburban districts.

The city of Albany seems to have awakened from comparative lethargy in the past few years to civic activity and to a realizing sense of her opportunities and responsibilities. This improvement has been occasioned by civic improvement societies, boosting clubs, and to some extent by the Chamber of Commerce. City officials are generally content to draw their pay during their term of office and wait for the next man to do the work of boosting and thinking for future betterments.

I am no longer connected with the Bureau of Parks, but have the satisfaction of walking under the shade of miles of city streets and boulevards planted by myself,

and the pleasure of passing a leisure hour daily in the parks I have planned and constructed.

My professional work is now entirely confined to private estates and giving advice on all matters relating to landscape work. In this line of effort I find congenial clients, good remuneration and healthful, congenial occupation.

WM. S. EGERTON, L. A.

Albany, N. Y.

I am in receipt of your favor of the 25th inst., and in answer to same wish to say that our annual report is at the present time in the printer's hands and will most likely reach us about May 1. This gives a complete account of all the new work performed in our park system. Our last an-

nual report is undoubtedly already in your possession. If not, I shall be glad to send you a copy of same.

I have just returned from a two weeks' absence in the East and naturally I am crowded with work and unable to reply at length as requested in your letter.

THEO. WIRTH,
Superintendent.

Minneapolis, Minn.

With reference to yours of the 25th inst. I am forwarding you under separate cover a copy of our annual report for 1914, which has just been issued.

I would call your attention to the change in the staff, namely, that W. S. Rawlings is the superintendent of parks.

W. H. BAGGS,

Vancouver, B. C.

Secretary.

In answer to your letter of March 25, I do not know that there are any particular accomplishments made in our system during the past year that are worthy of mentioning, with the exception possibly of a landscape plan for Coggs Hall Park, which was prepared by Harris A. Reynolds, of Boston, and on which we are working this year.

I am sending you by same mail copy of our annual report, which gives a copy of this map and some other details in regard to the work in this city the past year.

Trusting that you may find this of some benefit, I remain, very truly yours.

WM. W. COLTON.

Fitchburg, Mass.

SYSTEM OF PARKS IN ALBANY SECOND TO NONE

By James Malcolm.

Albany, the city beautiful, is steadily keeping pace as Albany, the commercial city, grows. This is shown by the engagement of an expert city planner, Arnold W. Brunner, who has prepared comprehensive plans for the further beautification of the Capital City, only some of which have been made public. When all are known, it is declared, there will be revealed great possibilities not only of municipal ornamentation, but of a happy blending of the beautiful, the convenient and the practical.

Mr. Brunner has a fine subject to work upon. Nature has supplied a magnificent river and inspiring hills as part of the setting and these have been supplemented by as fine a collection of man-made parks as may be found in any city of its size in the country.

In fact, Washington Park, of ninety acres, located in the center of the city, is declared by travelers to excel any they have seen. Washington Park's special claim to loveliness lies in its old and stately elms and other foliage, the result of slow growth and great care.

BEAVER PARK PROGRAM ELABORATE.

The next park in order of importance is Beaver Park of seventy-eight acres, for which is projected one of the most ambitious recreation grounds of any city of three or four times the population of Albany. To carry out the plan the city has already appropriated \$50,000 and a few of the facilities now authorized are:

A stadium 600 feet long, with a quarter-mile running track; immense swimming pool for adults and children; four or five baseball diamonds; fifteen tennis courts; coasting hills for winter sports; children's playgrounds with all modern apparatus; pergolas and buildings for clubs and associations.

The topography of Beaver Park easily



PLAN FOR DEVELOPMENT OF EASTERN SECTION OF BEAVER PARK.

lends itself to the construction of a stadium of the Greek fashion, there being hills on both sides of such expanse as to afford an innumerable multitude opportunity to watch what is going on in the natural amphitheater. The stadium is to be almost precisely the dimensions of a historic stadium restored recently in Greece.

Albany's parks will be connected by a boulevard system which will almost encircle the city, when the plans, under consideration by Mr. Brunner and city officials, are worked out. Manning boulevard, skirting the city on the west and north, will form the biggest section of this connecting highway. Western avenue, also a part of the park system, is the link between Manning boulevard and Washington Park. Plans have been prepared showing how Washington and Beaver parks may be linked by

way of New Scotland avenue, Myrtle avenue and Leonard place.

PLAN BOULEVARD FOR SOUTH.

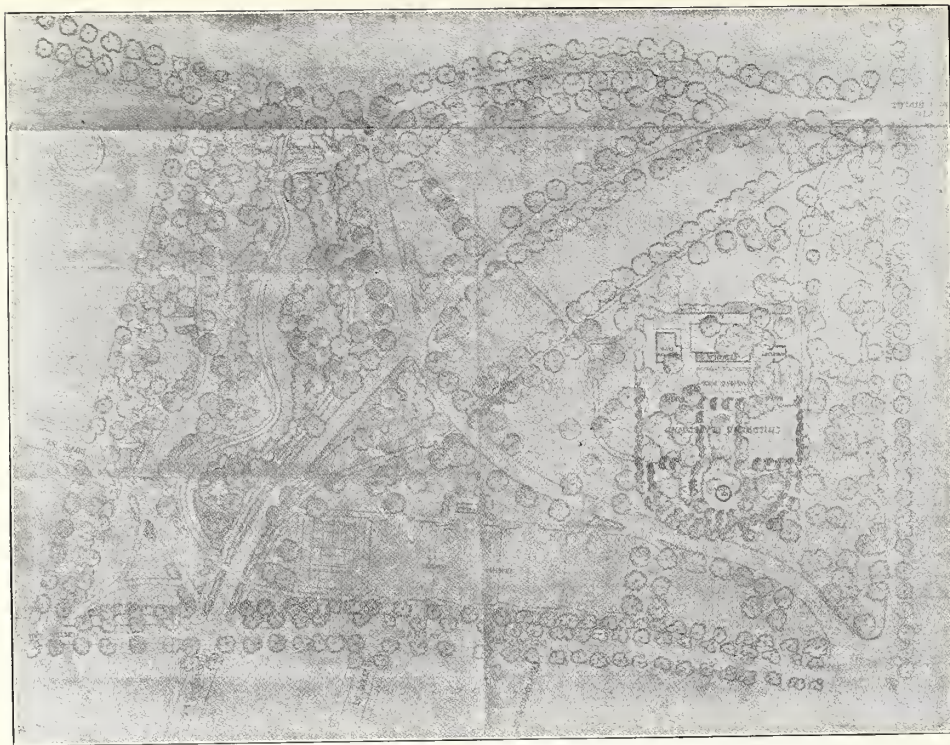
On the southwest, south and western border a plan is being developed for a boulevard, beginning at a point near Kenwood on the Hudson River, running west to Delaware avenue, a short distance south of Second avenue and the Whitehall road, thence northwest to New Scotland avenue.

In the same general plan it is suggested that a more direct route from Beaver Park to the river, over the Greenbush bridge, be made by widening and improving some streets for automobile traffic. Some of Mr. Brunner's plans may not be realized for years, but he undoubtedly is urging a scheme which will serve as a guide to city administrations to come, so that park improvement will proceed along harmonious lines instead of by a haphazard policy.

Washington Park, now the particular beauty spot of the city, took the place of a cemetery, an old military parade ground and an unkempt residence section. It is not yet fifty years old, the first work toward making it a park having been undertaken in 1870. Its splendid elms were planted about a century ago when it still was a burial ground and then far removed from the center of Albany's population.

Beaver Park, not many years ago, was a pestilential dumping ground. On its lower border was what was known as Martinville, one of the city's slum districts. For several years it has rapidly been growing into a beautiful pleasure ground. With the \$50,000 available, it is the city's purpose to add greatly to the tree and shrub ornamentation of the park. The extensive view over the Hudson River and to the Rensselaer hills gives it a scenic advantage over all other Albany parks.

Of the smaller parks, Sheridan and Riverside will call for most attention in the



PLANS FOR DEVELOPMENT OF WESTERN SECTION OF BEAVER PARK, ALBANY, NEW YORK.

way of improvement this year. Sheridan Park is between Swan and Dove streets. On Elk street, running along the crest of

the hill overlooking the Clinton avenue district. When completed it will be a splendid addition to the small breathing spots.

ANNUAL MEETING OF PARK SUPERINTENDENTS

The program of the sixteenth annual meeting of the American Association of Park Superintendents, to be held in Newburgh, N. Y., and New York City, August 24, 25, 26 and 27, 1914, has been completed. Headquarters in Newburgh will be at the Palatine Hotel, in New York at the Hotel Astor.

The following announcement of welcome has been issued, signed by Mayor John B. Corwin, Park Commissioners William C. Belknap, Henry M. Leonard, W. L. Smith and William H. Coldwell, and Superintendent of Parks Charles Haible:

"The Mayor and Park Commissioners of the City of Newburgh voice the sentiment of all the people of the 'Queen City of the Hudson' in extending to you a cordial welcome. Next to its beautiful scenery the Hudson River valley is noted for the warmth of heart and hospitality of its people. Come by all means to the convention. A warm welcome and delightful entertainment await you."

The complete program follows:

The story of the founding of Newburgh has come to be an important part of American history. It has been so often repeated since the time of Queen Anne that it seems superfluous to say more than that it crowns the hill overlooking Newburgh Bay in a most picturesque manner. It is fifty-eight miles from New York and has rail-

road and steamboat connections that are tiresome in their enumeration.

The Palatine Hotel, headquarters of the convention at Newburgh, is just about the center of population of the city, five minutes' walk from all railway stations and boats.

PROGRAM.

MONDAY, AUGUST 24.

Newburgh, N. Y.

3 p. m.—Meeting of the Executive Board.

7:30 p. m.—Annual meeting. Address of welcome, Mayor of Newburgh; addresses by the Park Commissioners of Newburgh; response, President H. S. Richards.

A brief sketch of the life and works of Andrew Jackson Downing, by Prof. F. A. Waugh.

"The Preservation of Natural Woodlands Under Park Conditions," illustrated lecture and discussion led by Ogelsby Paul, landscape gardener, Fairmount Park, Philadelphia, Pa.

TUESDAY, AUGUST 25.

7:30 A. M.

Newburgh, N. Y.

A trip to the Beacons, three miles distant, by boat and funicular railway. These two mountains, known as North and South Beacon, are points where signal fires were displayed during the revolutionary times as warnings to the country of the approach of the enemy.

TO ENLARGE RIVERSIDE PARK.

Riverside Park, close to the Hudson River, in the oldest and most congested section of the city, is to be enlarged to nearly three times its present size. When finished it will extend south to the Greenbush bridge and north of Madison avenue and the boat landing.

The city owns 620 acres of undeveloped land at the extreme western boundary north of the Country Club. It was the site of the old Rensselaer Lake reservoir and may some day evolve into a park when population marches farther westward.

On the northern boundary is a similar opportunity for park making on the site of the Tivoli lakes, where the city still owns a large area. Up to 1888 Albany's water supply came from these lakes. As it is on the route of the extended boulevard system there is additional reason for making it a recreation ground.

In the general scheme of park extension are the contemplated sunken gardens, an idea copied from Italy and other European countries. A low, narrow strip of land, three blocks long, extending from Main avenue to Ontario street and near Western avenue, has been set aside for this novel purpose.—*Knickerbocker Press*, April 16, 1914.

10:30 A. M.

Home of Andrew J. Downing, the father of American landscape gardening. This house was built by Andrew Downing in 1839. The little red cottage in which he was born still stands in this plot. In this once beautiful spot Andrew J. Downing passed the years of his short life, dying at the age of 37, losing his life by the burning of the steamboat *Henry Clay* on the Hudson River, July 28, 1852. Downing's body was buried in St. George's Cemetery and later on removed and interred in Cedar Hill Cemetery, six miles north of Newburgh.

Home of Charles Downing, an eminent horticulturist and brother of Andrew J., and a few private estates showing examples of the Downing planting.

Unsurpassed in its situation, a living monument of ever growing beauty to the memory of Andrew J. Downing. From here can be seen a long stretch of the Hudson River with the two Beacons to the east and to the south "Storm King" and "Breakneck," sentinels of the Hudson River Highlands, which look down upon the plains of West Point Military Academy.

At the south end of the city, the home of George Washington during the most trying days of the Revolution.

The scene of the disbandment of the American army in 1783.

The place where Washington refused the crown.

The old stone building, in perfect preservation, contains many relics of the days of his residence there, also the furniture used by him. In this house is the celebrated room with seven doors and one window. In the museum nearby are many authentic and valuable relics of Revolutionary and Colonial days.

En route to Washington's Headquarters we pass the Old Town Cemetery, founded in 1713. In this plot rest the remains of many of the old soldiers of the Revolution. Here also a boulder with bronze tablet marks the spot where stood the old Palatine Church in the heart of the "Glebe" land granted by the Crown to the early settlers. Near the cemetery on Liberty street a bronze tablet marks the site of Weigand's Tavern, a resort of Revolutionary soldiers and Newburgh's first post-office.

A short distance from here another tablet marks the birthplace of General Wood, who saw active service in three wars—1812, the Mexican and the Civil.

12 Noon.

We take automobiles for 25-mile ride down the beautiful Ramapo valley to the residence of Mrs. E. H. Harriman, which is located on one of the high mountains along the river. Here Mrs. Harriman will entertain the commissioners at luncheon, after which we drive through Tuxedo Park, the most beautiful residential spot in the country, containing suburban homes of many of our most prominent citizens.

Returning to Newburgh, we pass by General Knox's headquarters on Quassaick avenue, erected in 1754 by Colonel Thomas Ellison. Mrs. Knox was the leader of army society and many balls were given at this house, General Washington often attending.

We also pass Temple Hill, marked by a monument of field stone. At this spot, in Revolutionary times, was a building known as the "Temple," erected in 1782 for public meetings of all sorts. The Masonic Lodge

that followed the army held its communications here.

Of Temple Hill it has been written that while national independence was declared at Philadelphia in 1776, the Republic had its birth on the camp ground of the Continental Army at this spot.

Evening—Entertained by the city.

WEDNESDAY, AUGUST 26.

On the River.

By Boat—As guests of George W. Perkins to West Point, site of the Military Academy of the United States, the most beautiful and picturesque spot on the whole river, whose wide spreading plain and noble buildings are the admiration of all.

Just opposite here is Constitution Island, the home of the aged author, Miss Warner, the author of the "Wide, Wide World."

Then to the Interstate Park. This park comprises lands in New York and New Jersey, 10,000 acres being the gift of Mrs. E. H. Harriman, who also most generously gave the sum of \$1,000,000 for development. Some 18,000 more acres have been given by the states of New York and New Jersey. A grand boulevard, to be known as the "Hendrik Hudson Boulevard," is now being constructed from Fort Lee ferry, on the New Jersey shore, opposite the upper part of New York City, to Newburgh, a distance of about sixty miles.

On the way down the river from West Point we come to "Stony Point," where Mad Anthony Wayne made his gallant and successful attack on the British forces. This spot is now a state reservation, open to the public for rest and recreation.

Further down the river we have on our right the rocky ramparts known as the "Palisades," opposite which on the eastern bank are to be seen the homes of many prominent men, including John D. Rockefeller, F. W. Vanderlip, the well-known banker; Greystone, the former residence of Samuel J. Tilden, once Governor of New York state.

Below here appears the tomb of General U. S. Grant, also the sailors' and soldiers' monument, and continuing on past the

docks of the transatlantic liners and coast-wise steamers and countless ferries, we come to the Battery Wall, the rounding point of the city, the junction of the North and East rivers, with Governor's Island right ahead of us and Bartholdi's colossal Statue of Liberty on our right.

From here the party will proceed to the Hotel Astor, the headquarters in New York City of the convention. The remainder of the evening will be at their disposal, no special program having been arranged.

THURSDAY, AUGUST 27,

New York City.

By automobiles, 9 a. m., through the park system of New York City, passing through Central Park, Riverside Drive, Van Cortlandt Park, Moshlau Parkway, to the New York Botanical Gardens, reaching the Zoological Gardens about noon. View the Zoological Gardens for an hour and then luncheon. Leave the Gardens at 2:30 p. m., passing through the following points: Thomas Jefferson Playgrounds, East 101st street playground to the 102nd street entrance of Central Park, through the park down to Fifth avenue, passing the museums and public library, Madison Square, Union Square and Washington Square parks to the Tompkins Playgrounds; thence to Hamilton Fish Playgrounds, through Delancey and other streets on the East Side to Seward Playground; thence to Mulberry Bend and Chinatown, over the Manhattan Bridge past McLaughlin Playground to Prospect Park Plaza; thence up the Eastern Parkway past the Museum, through the Botanic Gardens into Prospect Park by way of the Willinck entrance. In Prospect Park the automobiles will pass down the West Drive, stopping at the Vale of Cashmere, Rose Garden and the main entrance, up the East Drive past the Litchfield Mansion, through the center drive to the Flower Garden and thence along the South Lake drive leading by the Ocean Parkway entrance, along Ocean Parkway to Coney Island, where the rest of the evening will be spent seeing Luna Park and other places of amusement.

IMPROVING VEGETATION IN BOSTON COMMON

By Hans J. Koehler.

The moribund condition of the trees on the Common has been due to the combination of a number of conditions, chief of which are lack of sufficient moisture, a poor or insufficient soil, compacting of the same by trampling by people, insect pests, and bad atmospheric conditions. It was reasonable to suppose that all of these conditions, excepting the last, could be remedied by means within the reach of those in authority on the Common. The idea in mind was both to prevent a recurrence of the present state of affairs in trees now young or to be planted in the future, and,

so far as possible, to reinvigorate the older trees and save them from premature death.

IRRIGATION.

One of the first systematic steps, taken in the winter of 1909 to 1910, was to install an irrigation system. Since there are no very unusual features about this, it needs only the briefest description.

The mains are 6-inch, the laterals 4-inch and the hose connections 2½-inch. The hydrants are somewhat over 200 feet apart, distributed throughout the Common. The pressure is strong enough to keep, say,

one-half dozen 2½-inch hose going at the same time.

This irrigation system has been quite liberally used, especially during the summer of 1913.

INVESTIGATIONS AND EXPERIMENTS.

During the summer of 1910 a number of investigations and experiments were made with sub-irrigation, soil improvement and leopard moth work, also forty-eight mechanical analyses of soils were made.

As a result of these investigations and experiments it was decided not to attempt

the installation of a sub-irrigation system because it appeared impracticable.

SOIL IMPROVEMENT.

Both the topsoil and the subsoil on the Common varied considerably, the latter more than the former. The topsoil averaged about 15 inches in depth, and as a rule was quite good from a mechanical standpoint, excepting that it had become packed down. The subsoil varied from the most porous gravel to the most impervious clay, although the latter condition was not very widespread. As a rule, it was low in its percent of organic matter. Nowhere was there a serious excess of water in the soil, but, on the contrary, there was a serious lack of moisture almost everywhere during periods of scant rainfall in the summer.

Briefly, the scheme of soil improvement decided on was to increase the depth of the topsoil from an average of 15 inches to 36 inches over an area within reach of the tree roots, and at the same time to increase its per cent of organic matter, available nitrogen, phosphoric acid, potash and lime. Precedent for this scheme was abundant, in the practice of many successful horticulturists, and in incidents in nature.

To carry out this scheme the procedure described in the following was in the main adopted, although it varied somewhat from time to time.

First the topsoil was stripped to its full depth, and either placed in spoil banks or used on areas ready to receive it; then the subsoil was removed till the excavation reached a depth of three feet below the surface.

The worst of this subsoil—the most gravelly, the sandiest and the most clayey—was removed from the premises and disposed of. The remainder, comprising the smaller proportion which was considered as mechanically equivalent to a lean topsoil, was kept and used in the back filling, being loosened, aerated and enriched by fertilizers in the process of handling.

When excavations have been made to the full depth of 36 inches they were filled with one or more of the following mixtures, viz.: (a) the original topsoil with manure; (b) topsoil brought in from the outside with manure; (c) selected topsoil with manure. The proportion of manure varied from one-fifth to one-third, and to each mixture lime and bone were added at the rate, per cubic yard, of between one and two pounds of lime and about half as much bone. The mixture containing the subsoil was used in the bottom of the excavations. The topsoil mentioned as being brought in from the outside had to be supplied to meet the vacancy caused by the removal of the poor subsoil. The filling was carried six inches above the original grade to allow for settling.

The excavating and refilling was carried on in trenches, practically paralleling the

rows of trees. The trenches were made in three widths, namely 30 feet, 10 feet and 5 feet. Thirty feet was regarded as the most desirable width, but there were not funds enough available to make them all this width. However, comparatively few were made as narrow as 5 feet, very many were made 30 feet, and most of them were made 10 feet wide. The width of the unexcavated space between the trunks of the trees and the trenches varied with different trees. In the case of very small trees it was only 3 or 4 feet and in the case of very large trees it was 25 feet. In addition to the 36-inch deep soil improvement, surface soil improvement consisting of spading under manure at the rate of 50 cords to the acre, and raking in lime and ground bone each at the rate of one ton to the acre, was done in the areas between the trees and the trenches, and also in the areas beyond the trenches, excepting in the case of the parade ground, where the larger part of the grass area received only a plowing, harrowing and raking, and a moderate application of seeding down fertilizer. Also there were a few areas, beyond the trenches, where a 24-inch deep soil improvement was carried out similar to the 36-inch deep soil improvement.

COMBATING INSECTS.

With the exception of the leopard moth and the elm bark borer, the important insect pests seem to have been fairly effectively dealt with in the past, although there was some evidence that, in the case of the tops of the tallest trees, the insecticidal spray had frequently failed to reach them properly, thus leaving them exposed to the attacks of the elm leaf beetle, and perhaps accounting in part for the very bad and moribund condition of the tops of these trees as compared with the quite good condition of these same trees lower down. This fact has a bearing on the leopard moth situation and perhaps on that of the elm bark borer because attacks of these insects seem to be more fatal to weakened trees than to vigorous, healthy ones.

Without going into detail, it should be said that the leopard moth does its greatest injury by girdling limbs and killing them, and also that its life history is of such a nature that, so far, no wholesale method of coping with it and killing a multitude of insects by one operation, as by spraying or destroying egg clusters or nests, has yet been feasible, except that of cutting down a tree and burning it. Therefore, short of this radical method, the insect can be controlled only by killing the larvae individually, as by cutting off the extremities of the young twigs and destroying the same by fire or otherwise in the summer, whenever these are seen to harbor the larvae, and by killing them in their burrows in the wood by hooking them out with bent wire or by the injection of bisulphide of carbon, a very costly procedure—about as

killing potato bugs by squeezing them to death between the fingers would be.

Different trees are of different degrees of susceptibility to its attacks, usually varying with the kind, although, as remarked before, a tree of weakened vitality seems to suffer more seriously than a vigorous one; also certain individual trees of a kind ordinarily susceptible to its attacks seem to be immune: just as certain individuals of the human race are immune to diseases which are fatal to the average run of humanity. The common European linden is about the only kind of tree on the Common which is practically free from its attacks. The English elm, especially a young, vigorous one, is comparatively free from its attacks, and when attacked does not seem to suffer much. The Scotch elm is very severely attacked by the leopard moth, which makes deep furrows and great scars in its branches, but seldom girdles them, so that the vitality of the tree is not seriously affected. On the south side of the first far walk, north of the wooden sanitary building for women, there are seven or more large trees, usually mistaken for English elms which are of another species altogether, probably *Ulmus nitens*. This tree is quite seriously attacked by the leopard moth. The American elm, the tree most in evidence on the Common, unfortunately is frequently attacked by it, with serious results. Staghead, or death of the ends of the branches, a prominent and unsightly symptom, always precedes the death of a tree caused or furthered by the leopard moth.

Unfortunately no determined effort was made to cope with the leopard moth until its depredations had been going on for some years, and it had become firmly established and had done a great deal of damage. This is hardly to be wondered at, since the history of a great many insect pests is that those concerned do not realize the gravity of the situation until matters have reached this stage, and then the realization comes with a shock. In times past, trees which showed staghead were treated by cutting off entirely the staghead limbs where they joined the trunk or larger branches, leaving untouched those branches in which the staghead was not conspicuous or was absent, but yet where the larvae were undoubtedly present; later on more branches were similarly cut off, the result being trees with a few naked large limbs devoid of young shoots. These large limbs were apparently given no further attention and they, too, in turn, developed staghead, with the result that the trees were left in such a bad condition that many had to be taken down. Thus the measures adopted finally proved of no avail, and, if anything, instead of arresting the trouble they seemed to accelerate its deadly effect. The measures seemed to be directed mostly against the symptoms of

the disease, and the disease itself was practically neglected.

Under these circumstances radical measures were necessary. Many of the larger American elms and other trees were headed in or pollarded, thus giving them a stubby appearance. While trees so headed in are much marred in their beauty, as compared with healthy ones not so treated, they, at least, look better than ones full of stag-head, and in time to come may recover much of the beauty of which they have been deprived. This heading in, while it relieved the trees of a mass of dead wood, at the same time removed many of the larvae. In addition to being headed in, the trees were further very thoroughly treated by the methods already mentioned for killing the larvae.

The elm bark borer is a pest of apparently recent introduction, but it is doubtful if it is of primary importance, since it seems to attack only trees already very much weakened. Elms which have been transplanted and so have been checked are sometimes attacked the first summer after transplanting. Sometimes such trees succumb that same season, or manage to pull through and revive the following summer, not to be bothered any more by the pest. Attempts at remedial measures so far have proved unsatisfactory and reliance will rather have to be placed on preventive measures, such as keeping the trees in good growing condition and cutting down and burning those badly infested.

RESULTS.

In almost every instance the root development has been very marked, all kinds of trees having made an abundance of new, fibrous roots; in some instances this development has been really quite astonishing, apparently exceeding many times over in volume that of the old roots which were cut off as a necessary incident to the soil improvement. Some of the comparatively young English, American and Scotch elms have in three seasons' growth made new roots twenty feet long, measured from the point where the old roots were cut off and interspersed throughout the whole 36-inch depth of the improved soil, excepting, of course, near the surface. Even some of the old American elms made new roots fifteen feet long.

The effect on the growth of the trees above ground is not as marked; this was not expected nor desired. However, in the areas first taken in hand (in the fall of 1910 and the spring of 1911) almost all of the young English and American elms equal or excel in vigor, thrift and fine appearance—as evidenced by their luxuriant foliage, annual height growth, that peculiar summer cracking of the bark so indicative of rapidly expanding tree trunk, and the rapid healing of wounds—elms of a similar size to be found anywhere in the vicinity. The best English elms on the Public

Garden in spite of more favorable conditions in the past, are not as vigorous and fine looking.

The trees referred to, about forty-five in number, are located around the Brewer Fountain, near the southern entrance of the Park street subway station and elsewhere in the vicinity. It is only fair to say that they looked quite fine before they were taken in hand, although hardly as fine as since then. These trees if properly taken care of should be good for another fifty or seventy-five years, and it is to be hoped that nothing will take place on the Common in the future to cause their taking off before old age comes upon them.

In these same areas are a number of old American elms which look quite fair, especially when they are in leaf, and show the symptoms of vigor described in the case of the younger elms above, but of course not in so marked a manner; most of the European lindens are looking well and the few pre-revolutionary English elms are at least holding their own and the one opposite West street looks quite exceptionally fine in summer.

It is also a significant fact that, for about two years no dead or dying trees have been taken out of the first improved areas, except one or two small young trees lost in transplanting, but that during the same period, many dead or dying trees were still being taken out of the unimproved areas or the more recently improved ones.

The results mentioned undoubtedly are due to a combination of the various measures adopted for the welfare of the trees—that is, the irrigation, the soil improvement, and the combating of insect pests.

In the more recently treated areas most of the trees have already made marked new root growth and some are beginning to respond in their growth above ground, although there are quite a number still in such condition that they will have to be removed before very long, especially around the Frog Pond. Here and there a tree may have been seriously injured and its death accelerated by cutting too close to the roots.

CONCLUSIONS AND FUTURE POLICY.

Probably some mistakes have been made in the details of the work, but the principles are sound, and it should be pointed out that the trees on the Common are in far better shape than many trees in the suburbs which seem to be suffering from parallel conditions—that is, lack of moisture, insufficient and poor soil and insect pests—and where the per cent of loss has been vastly greater. On the Common the mortality has, in part, been reduced to a reasonable proportion and to quite an extent things have taken a turn for the better and are on the mend.

In comparing vegetation on the Common with that on the Public Garden the

vastly differing conditions should be taken into consideration. On the Public Garden the trees, as a rule, are younger; they have been copiously watered for some years past; the water table is nearer the surface of the ground; the soil and subsoil appear to be somewhat better, as shown by test pits, than the soil and subsoil originally on the Common; and the public is kept off the grass; so the soil is not compacted around the trees. Also it should not be forgotten that within the last two years, even on the Public Garden, trees, eight in number, some being quite large elms, have been removed because they were in the same decrepit, staghead condition as were those which were removed on the Common; also it has been found advisable to head in one large American elm. On the whole, however, the Public Garden holds out encouragement that the ravages of the leopard moth, which is about as abundant there as on the Common, can be kept within bounds if the trees are kept in good growing condition.

During the progress of the work eleven chemical analyses were made of the soil, comprising samples of the improved and the unimproved areas. These showed that some of the soil is still deficient in phosphoric acid and lime. Based upon this fact and facts of horticultural practice, these two substances, in the improvement carried out in 1913, were used in about twice the proportion adopted in the previous work. Therefore in all the areas improved previous to that time these substances should still be added as top dressings—the former probably in the shape of acid phosphate, and the latter in the shape of pulverized lime stone. Also it would be well to add some soluble, available potash, notwithstanding that the total amount of this substance in the soil is quite large—but probably only slowly available.

Copious watering should be continued in times of drought.

Insect pests should be vigorously combated without letup, especially the leopard moth.

In future plantings, earnest endeavor should be made to retain the fine effect of overarching American elms on the Charles and Beacon street malls, excepting at the upper and of the latter where English elms, as at present, might be perpetuated. In the other parts of the Common probably the main reliance should be placed on English elms and European lindens, unless it be that, in the future, some less expensive way is discovered of coping with the leopard moth, or an immune race of American elms is developed. This latter idea is not so chimerical as it may appear to some, because, as already remarked, certain individual trees seem to be immune. If this proves to be the case it is only necessary to propagate from such individuals by grafting in order to secure an immune race.

At present only a passing reference will be made to the grass. Manifestly those areas thrown open to the free use of the public cannot be maintained in good grass. On the areas from which the public can be excluded good grass can be established excepting in the very shadiest ones. There are some areas even now which are in fair condition of turf, notable being the two large areas just south of the Weather Bureau kiosk. However, this matter of grass is a large subject and should be treated of in a separate article.

In the above only a few of the most obvious points relating to the future policy as regards the vegetation on the Common have been touched upon; but there is still one more point, perhaps the most impor-

tant of all still to be referred to, and that is the attitude of mind respecting the subject. If it is assumed that it is not worth bothering about the old trees, because they are doomed in the near future anyway, that will undoubtedly be their fate, just as a man seriously ill who makes up his mind that there is no help for him will probably die. The stand must be that the comprehensive, radical measures have been applied, to be followed up by hopeful, intelligent, unremitting care. With this idea, many, if not most of the old trees may be expected to live and afford pleasure for a generation or more, and the younger trees will in their maturity be spared the troubles and disfigurements which now attend their seniors.

PARK NEWS.

There was unveiled in the Public Square at Bordentown, N. J., a handsome fountain, dedicated to the memory of the Bordentown Female College and presented by the College Association to Bordentown. This fountain is the work of Richard Thomas, of Bordentown, and is 7 feet in height, 6 feet in width and 4 feet in thickness. It is carved from pink Tennessee marble and mounted upon a granite base and set on a concrete pavement.

The Board of Education and the Park Commission of Nashville, Tenn., are planning to create public playgrounds on the school grounds of the city. The park commission will install the playground apparatus and have general supervision of the work.

The City Club of Chicago will hold a competition for plans for a neighborhood center, the object being "to bring before the public the practical possibilities of enhancing neighborhood life in our cities by better buildings and grounds for neighborhood activities." The program for the competition has been prepared with the co-operation of the Illinois Chapter of the American Institute of Architects. In addition to the three sets of drawings which will be awarded the prizes, the jury will also select the eight next best and \$600 will be divided equally among these eight, to cover in part the expense of preparing the drawings. Inquiries for further information should be addressed in writing to "Neighborhood Center Competition," City Club, 315 Plymouth Court, Chicago.

Plans involving radical changes in the management of the National parks were announced by Mark Daniels, whom President Wilson recently put in the newly created office of landscape engineer and general superintendent of national parks.

"Within two or three years, the department of the interior hopes to popularize the parks for tourists and keep in the United States at least \$200,000,000 a year of the \$560,000,000 that is annually expended abroad by Americans," said Daniels. Among the changes Daniels has set out to accomplish are: Establishment of permanent headquarters of the National Park system in San Francisco. Making parks vastly more popular as resorts by attracting builders of fine hotels, through long term leases in place of the present year-to-year leases. Elimination of ugly structures and adoption of a type of artistic architecture that will harmonize with the environment of national beauty. Better accessibility to the parks, through the building of more roads and trails. Daniels said that his appointment was a step toward the establishment of a bureau of national parks.

Agitation to improve the Superior, Wis., city park at the Nemadji river with Wisconsin and Minnesota Points as sub-parks is being started by prominent East End citizens. They contend that the two points and the Nemadji river offer great possibilities and believe that a little money expended from time to time would make the Nemadji and Superior bay a pleasure resort for thousands of Superior rest seekers.

New Parks and Improvements.

That the city of Galveston, Texas, soon will have one of the finest parks in the southwest, and, in addition, will have a number of small beauty spots along its already famous boulevard, is indicated by preparations being made for the establishment of pleasure parks in the south end. At a recent meeting of the board of commissioners, the purchase of the property

between Avenue Q½ and the boulevard, Twenty-seventh and Twenty-eighth streets, was authorized, and the Galveston Commercial Association has agreed to add to that the block bounded by the same streets and Avenues Q and Q½, making a large park when the intervening streets have been closed.

A movement has been started at Kansas City, Mo., to improve Oak Grove Cemetery and make it a park cemetery. The park department has promised to make improvements there at once.

A park commission has been organized for Hugo, Oklahoma, and a pleasure ground will be platted off about one and one-half miles northeast of the city. The prospective location of the park possesses scenic attractions and includes a beautiful lake.

The lack of benches in Monument Valley Park, Colorado Springs, Colo., was recently noted by a business man, who contributed \$100 to start a fund to provide such benches. The park commission also hopes to secure money enough to construct a shelter pavilion in the park.

To forestall what they believe may develop into a menace to the city or an unsightly splotch upon the city's civic beauty, to obliterate one of the most dangerous crossings in the city, and to acquire for park purposes that section of the city known as Turtle Creek bottom, or Woodchuck Hollow, a committee of citizens of Dallas, Texas, has put a proposition before the city park board.

In the report of the examination of the books of the state board of agriculture of Indiana, Examiner Hendren recommends that the state fair grounds be used for a city park, after arrangements are made by the city of Indianapolis to police and maintain it. It has been pointed out that although the 214 acres occupied by the fair ground is worth \$636,000, the state has actually invested only \$133,000, and the board members are favorable to the plan of beautifying the grounds in collaboration with the city park board, and throwing the grounds open to the public. It has recommended the tearing down of some of the old buildings and erecting new, up-to-date ones at the expense of the state.

From the Park Reports.

From Racine, Wis., comes a most interesting report at the end of the first decade of park building in that city. The president of the board of park commissioners states that the plans of ten years ago suggested only in a very modest way the work that has been carried to completion. The large meadow in Washington Park was plowed during the fall of 1911, after having been in a wet and disused condition for a great many years, and was cultivated, preparatory to making a lawn. This lawn was usable by August, 1913. All the trails in the woodlands of Wash-

ington Park have been laid out, and cinders delivered for their construction. The bluffs in this park have been planted with shrubs and trees and, although difficult to plant, very few of them have died. Altogether, the park is in an excellent condition. A few improvements which were under way in Horlick Park have been completed, chief of these being the completion of paving of the drive, the widening of the south entrance of the park and the installation of the boulevard and park lighting system throughout the entire park. The general maintenance of Lewis Field playground has been quite satisfactory, there being a constantly increasing number of boys and girls in attendance. Three new playgrounds have been laid out, the greater portion of the apparatus for these having been made in the repair shop at a minimum cost, and the commissioners plan to cooperate with the board of education to

create playgrounds on the school grounds. The Forestry Department, created about a year ago, has planted a number of large trees for citizens on a cost basis, but with increased efficiency greater practical service of this kind could be rendered.

Another interesting report comes from the Public Parks Board, of Winnipeg, Manitoba. In Assiniboine Park, provision was made for all forms of athletics, including lawn tennis, cricket, lawn bowling, lacrosse and football. The picnic grounds were improved and the equipment added to. In Sargent Avenue Athletic Field an open air swimming pool 75x150 feet was erected at a cost of \$30,000. A running track, football, lacrosse and baseball grounds have all been provided for and graded and will be completed by the end of the season. Numerous improvements were carried out in Brookside Cemetery,

including the erection of a bridge and grading a roadway across Colony Creek to provide access to the new single grave sections. The contract has been let to Lord and Burnham for materials for the first unit of a conservatory in Assiniboine Park and very soon citizens and visitors will be able to see tropical plants growing in the fiftieth parallel. The park board recently received the gift of a parcel comprising 2.53 acres from the Inkster estate, to be used for park purposes and to be known as Seven Oaks Park. The fountain in Central Park, to be erected from the bequest of the late Emily M. Waddell, will probably be in operation this summer. Good progress was made on the improvements in the various parks under construction, particularly with tree and shrub planting, and the general maintenance of the parks has been such as to attract visitors in larger numbers than ever before.

SWAN POINT CEMETERY AT PROVIDENCE, R. I.

Swan Point Cemetery of Providence, R. I., recently published its annual report containing its charter, by-laws, rules and regulations together with a complete statement of statistics, financial and otherwise. The report follows:

"To the Proprietors of Swan Point Cemetery:

"The Directors herewith present their sixty-sixth annual report for the year ending December 31, 1913.

"We are again called upon to mourn the loss of a president. Mr. C. William Greene died suddenly on October 9, 1913,

in the fifty-second year of his age and in his fifth year as president of the corporation. The regard in which he was held by his associates is indicated by the following extract from the minutes spread upon the records of the Board at the time of his death: 'Mr. Greene was the esteemed personal friend of every member of the Board, always courteous, always considerate, and always willing to undertake more than his share of the duties incumbent upon its members. The close personal intimacy with him enjoyed by the directors was one of the chief privileges

of membership. Modesty, fidelity and thoughtful consideration, amounting to more than mere courtesy, were Mr. Greene's marked characteristics. Every position of trust and responsibility which he occupied was accepted that he might render needed service, none that he might assume personal prominence, or obtain public applause. Every obligation was quietly and scrupulously discharged, and in its discharge his uniform sympathy and consideration lightened the burdens and made pleasant the tasks of those who worked with him or under him.'



SWAN POINT CEMETERY.



SWAN POINT CEMETERY.

"Another vacancy in the Board was caused by the resignation of Mr. William Wanton Dunnell occasioned by his removal from Rhode Island. Mr. Dunnell had served as a director for sixteen years, and during that time rendered valuable service as a member of the Committee on Grounds. The directors filled these two vacancies ad interim, by the election of Mr. Knight C. Richmond and Mr. Edward F. Ely.

"The routine work of the cemetery has been carried along as usual, quietly and faithfully. The improvement of the avenues by regrading and macadamizing has been continued as opportunity offered, resulting in the addition during the year of about thirty-eight thousand square feet of this work as well as of about two thousand lineal feet of tarvia gutters in connection therewith. We have also begun the staking out and building of avenues in the portion of the cemetery west of the Old Swan Point road in accordance with the recently adopted Olmsted plan, and we are now grading and preparing a portion of this new section for burial lots—a work which must be pushed, as but few unsold lots remain to the east of that road.

"A large addition has been made to the trees and shrubs in the cemetery. About fifteen hundred were placed along the wall of the Alfred Stone road, which forms the north boundary of the new part of the cemetery, and some four hundred more were set out at various locations through the cemetery. In addition to the above, some forty-seven hundred evergreen *Pachysandras* were planted in the borders of drives just outside the entrance gates

and elsewhere. All of these trees and shrubs were raised in our own nurseries. We continue to keep in repair the waiting-room at the street car line and to beautify its surroundings with flowers and shrubs, although this land does not belong to us.

"The systematic and persistent care of trees and shrubs begun a few years ago has been continued during the past year. This included pruning, repairing and spraying as well as the destruction of browntail moth nests. The extensive pruning of the large trees has now been completed and will not have to be done again for some years, but the spraying and nest hunting must be continually followed up. Our superintendent reports that, notwithstanding the destruction of these nests last spring and the spraying done later in the year, there were gathered some ten baskets of them during December from the shrubs and smaller trees by our own men, while the Everett Forestry Co. worked on the larger trees, from which they gathered many more. It is an uphill fight owing to the fact that the trees beyond our northern border are badly infected so that the occurrence of a strong northerly wind during certain seasons spreads the infection among our trees again. However, it is a fight worth making and we intend to keep it up, hoping that in time a good example will prove to be contagious also.

"The Boulevard sewer referred to in our last annual report is now practically completed as far as Hope street, and we have taken advantage of it to drain the section of swamp land to the west of the boulevard, arranging with the city to build

at our expense two catch basins with drains running to this sewer. Not only will this put our land in better condition for use when it is needed in the future, but it will, we trust, be of immediate advantage to the community by reducing the mosquito pest.

"The wise methods in caring for and beautifying the grounds adopted years ago by our former superintendent, Mr. McCarthy, have been ably followed out and expanded by the present superintendent, Mr. Thurber, and while there is perhaps the greatest wealth of color in the spring—when, following the April glory of the forsythia, come in quick succession lilacs, magnolia, spirea, wistarea, rhododendrons, azaleas, deutzias, peonies and laurel, handing on the glory to the very end of June—yet at all times, winter and summer, the cemetery presents a quiet beauty that is very satisfying. The artistic grouping of evergreens of different shades and forms is particularly noticeable in winter and the gorgeous foliage of autumn must not be forgotten.

"The directors take this opportunity to express their appreciation of the way in which the various officers and employees have performed their duties.

"Respectfully submitted for the Directors,
"PRESCOTT O. CLARKE,
"Committee."

The statistics of the year's work are as follows:

Average number of men employed..	56
Interments, including 34 at Receiving Tomb	281

Interments from the Receiving tomb	15
Removals from other cemeteries....	11
Removals from the cemetery.....	11
Total number of interments to date	18,953
Slate vaults built.....	99
Plain graves opened.....	148
Foundations to monuments and tab-	

lets built	245
Curbings removed from lots.....	2
Old lots of proprietors regraded and	
sodded	3
Avenues regraded and macadamized,	
square feet	37,950
Land sold, square feet.....	18,937

Land purchased in the cemetery,	
square feet	3,151
Land graded and seeded, square feet	5,147
Number of lots under perpetual care	2,404
Number of lots under annual care..	434
Whole number of lots sold to date..	3,738
Tarvia gutters laid, linear feet.....	2,084

ST. CLAIR CEMETERY AT GREENSBURG, PA.

The entrance to the new St. Clair Cemetery at Greensburg, Pa., is to be beautified and greatly enriched by the erection of an extensive set of solid bronze entrance gates. The privilege of adding the improvement was requested of the St. Clair Cemetery Association by Mrs. Elizabeth Stauffer Moore and her children, Mrs. Nathan Hopkins Heft, Mrs. Edward E. Robbins, Mrs. Herbert Llewellyn Wigmore and James Pressly Moore, the gates to be in memory of the late John William Moore and other members of the family. The directors of the association at a meeting the other day unanimously favored the plan and expressed their pleasure in granting the request of Mrs. Heft from whom the first suggestion came.

The contract for the immense granite columns and solid bronze gates has been let to the Harrison Granite Company, of New York and Barre, Vt., who were also the designers from suggestions offered by Mrs. Moore and J. A. Lawson, superintendent of the cemetery. The gates will be located at the turn in the entrance to the cemetery, and will be exceptionally wide. At the other end of the mammoth gates there will be foot gates of the same design as the larger ones. The columns of the center gates will be four feet six inches square, and the side gates three feet six inches square. The work will be completed, it is expected by November 1.

With the completion of the work designed the St. Clair Cemetery will practically stand alone in all of the country in the possession of the Barre granite columns and solid bronze gates. The material was selected with a view to beauty and of long period of use, for it is claimed that the bronze will outwear iron and stone, such as the gates to the great body of cemeteries in this country are constructed. When the gates are completed the entire front of the cemetery will be beautified.

J. A. Lawson, general superintendent of this cemetery, says: "One year ago we started to remodel the cemetery and place it on a perpetual care basis, placing 40 cents per foot of all lots sold to this fund and also allowing the old lot owners to come in on the same basis, which they are doing very fast.

"The cemetery was organized twenty-one years ago and contains a great many lot owners who are very wealthy. For some



ST. CLAIR CEMETERY, GREENSBURG, PA.

reason there was no interest taken in the places, but now they see the difference between the old style of cemetery and the new, and they are all becoming very much interested. The new entrance will, without doubt, be one of the finest in the country, being built very substantially, well proportioned, quite plain, but very artistic. The entrance will stand back from the main highway a considerable distance, from the front part of the cemetery and about two acres inside of the entrance being kept for park purposes only.

"Last year the cemetery spent \$5,000 on improvements in the way of a record system, new tools and implements. This fall we will build a new office and waiting room and construct our own water system.

"The principal change made in the cemetery which appeals most strongly to the directors and everyone else is the doing

away with all Sunday funerals and business. The office is open during the week at regular office hours, the superintendent's residence having been moved to town and all the old buildings torn down. Before we started to remodel the cemetery they sold their lots at 17 cents per foot. The price now is 70 cents with perpetual care, and the business has increased nearly double in one year. This speaks well for the modern cemetery."

Description:

Number Acres—One hundred and fifty-two.

Soil—Light loam.

Topography—Rolling, from front noll the view can be seen for miles in all directions and overlooks the city; one mile and a quarter from center of city, on the Lincoln highway.

Number of Acres in Use—About fifty.



ST. CLAIR CEMETERY, GREENSBURG, PA.

Number of Acres Parked and Reserved—About five.

When Organized—1893, twenty-one years.

Management—Board of Directors, 6; in case of death or resignation new mem-

ber is chosen by present board, but must be a lot owner.
 reached over five thousand; the directors expect this fund to increase very fast in the next few years, at the rate the old lot owners are endowing their lots.

Price of Lots and Single Graves—Lots are sold at 70 cents per foot and upwards. Single graves, \$5.00 and up to \$20.00, according to age.

Rules—All foundations constructed by the cemetery and markers set, only one monument allowed on each lot; each grave allowed one modern marker, no fences or railings around lots and all posts set even with the ground. Planting of all shrubs must be decided by the general superintendent.

Annual Interments—160; total number of interments, 2,278. On March 1, 1913, a record system was started, and we expect it to be completed by the spring of 1915.

Principal Trees—Along each drive maple trees are planted; a few other trees in different parts of the grounds; for ornamental purposes a variety of shrubs and flower beds are planted.



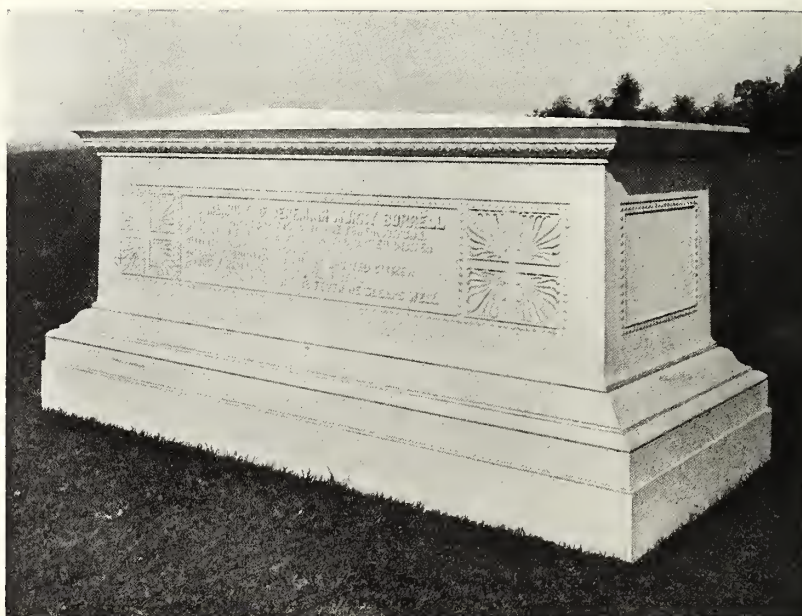
ST. CLAIR CEMETERY, GREENSBURG, PA.

ber is chosen by present board, but must be a lot owner.

Sections Platted up to March 1, 1913—Platted by mining engineer, only one drive laid out, remodeling being done by J. A. Lawson, general superintendent, son of B. Lawson, Harrisburg, Pa., and brother of B. Lawson, Jr., secretary and treasurer of American Association of Cemetery Superintendents, Chicago, Ill.

Buildings—Office and waiting room at entrance (cost \$3,000); all other buildings at lower corner of cemetery set aside for that purpose; foreman also lives here; superintendent lives in city. All business must be done at the superintendent's office at the regular office hours.

Perpetual Care—Since remodeling was started all lots are sold on the perpetual care system, 40 cents per foot being set aside for that purpose. Old lot owners can endow their lots on the same basis. In one



MONUMENT IN ST. CLAIR CEMETERY, GREENSBURG, PA.

Officers—Col. Richard Coulter, president of First National Bank, president; J. R. Eisaman, vice president of First National Bank, secretary-treasurer; J. A. Lawson, general superintendent.



ST. CLAIR CEMETERY, GREENSBURG, PA.

Sexton Jesse J. Shelby, who has charge of Fairview Cemetery in Joplin, Mo., has reason to be very proud of the improvements he has made there recently. The weeds have been replaced by flowers and green grass, the driveways have been graded, gravelled and laid out in good taste and street signs have been set at all the intersections. Heretofore there has been no fund available for this purpose except a comparatively small mound derived from the sale of lots. But through a new ordinance, the entire income from certain mine royalties due the cemetery will be available for its care and maintenance.

THE OHIO CEMETERY SUPERINTENDENTS' MEETING

The annual meeting of the Ohio Association of Cemetery Superintendents and Officials was held at Ravenna, Ohio, June 24 and 25. The convention was among the most enthusiastic meetings held by the association up to date. About fifty superintendents and officials of cemeteries were present at roll call, all parts of the state being represented. Five new members were enrolled. The membership now consists of one hundred active members with ten honorary members. The Ravenna people had made great preparations for this gathering, and proved to be most royal entertainers.

The first session was called to order at 1 p. m. June 24 in the chapel at Maple Grove Cemetery. After the roll call President R. E. Gifford, of Ravenna, gave his address as follows:

PRESIDENT'S ADDRESS.

"Ladies and Gentlemen: The time has come to open our convention and it is my privilege and pleasure as president of this association to give you greeting and welcome you to the hospitality of our city, trusting that the memories of the occasion may be such that it may again be our good fortune to entertain you. I appreciate the honor of presiding over such an assemblage, a meeting at once gratifying and significant, demonstrating continued interest in the association, its work and its welfare.

It was at Dayton that I joined its ranks, and I am still congratulating myself over the good fortune that has placed me in line with its benefits, revealing new and valuable phases of work, broadening my conceptions and quickening my inspirations. I have realized large dividends, not the least of which are its sociability and good fellowship, which I am sure is a common experience of all.

It was my privilege in early life to work among plants and flowers with my father and grandmother in my native England, thus linking my youthful thought with the beauties and marvels of the floral world into which I was initiated at an age favorable to the development of a natural love for the work of my future calling, a love which has expanded with the years of my life and taken deeper and stronger hold of my affections. And an organization with the keynote of progress along the lines of our common calling is well worth our time and attention.

I note the presence of new faces and sincerely hope that all who have come to the Ruhlen will cross it and join the organization, which needs your help to do still larger and better things. For it should be remembered that our work is for the future as well as for the present and that a good working membership should be maintained as well as our standards. One of the objects of these yearly meetings is that of mutual interchange; to present new ideas, to compare methods and experiences and from them all to reinforce the fund of our common knowledge, thus making it a congress of huddlers and doers.

An art to be cultivated by the cemetery superintendent is that of smiling down his impatience that would otherwise find different expression. When someone takes you to task because of some imaginary grievance involving, say, the charge of neglect or lack of judgment and tells you as a finality that 'out where I live we do things better,' you are supposed to receive it with proper humility and a deferential smile, lest you be told that the matter will be called to the attention of the trustees or that it will be aired in the public press.

High tribute is due the Ravenna Ladies' Cemetery Association for the beauty of the Maple Grove grounds and their excellent appointments. They it was who built this handsome chapel and caused these pretty lakes to be fashioned into ornamental water wreaths and they were the prime

movers in reclaiming the grounds from their former condition of neglect and unsightliness. Many present day citizens recall the time when instead of being one of the prettiest lawn cemeteries in rural Ohio, Maple Grove had little to distinguish it in many essential particulars from the ordinary neglected graveyard of pioneer days. It was in 1880 that the work was commenced under the initiative of the association of earnest women, P. L. King, superintendent of the grounds at Butler, Pa., being then superintendent of Maple Grove. The work of improvement has steadily and rapidly progressed under the continuing impetus of the ladies of the association and of liberal minded trustees until the grounds are what you now see them.

A few years ago we learned from experience that we ought to get more money for our burial lots in order to create a fund for their perpetual care, and ever since the price was advanced we have been trying to induce owners of lots purchased prior to the advance to endow them with a certain amount of money. This, of course, is optional with them, for while it is true that in most instances they paid but a fraction of what they would now have to pay for the same lots, they paid the price then asked by the cemetery authorities.

I would like to ask the opinion of this convention about these lots. Shall they be cared for or not? My own opinion is to do so now. The satisfaction of bringing this much consolation to those financially unable to pay the additional price is a great one, and these are the people who most frequently visit the cemetery and who feel the loss of their dead most keenly."

After the preliminaries of the convening session were held, a very interesting paper on "Tombstones," by Mr. George F. Titus, of Norwalk Cemetery, Norwalk, Ohio, was read. This was a very interesting paper and gave room for much valuable discussion, bringing out many points of interest relative to monuments and cemetery memorials. After this paper we adjourned for the inspection of Maple Grove Cemetery. This is a very pretty cemetery consisting of about eighty acres with thirty acres of improved ground. It is conducted on the Lawn Plan and shows the superintendent, Mr. R. E. Gifford, is an expert in his line. The many beautiful trees, plants, and shrubs showed Maple Grove at its best on this occasion. It was with some hesitancy we left this quiet cool spot, on this warm evening, for the city.

Convening in the Foresters building at 7:30 p. m., a splendid supper was served to the guests and their friends by the ladies of Cemetery Association of Ravenna. About one hundred and fifty partook of this feast of good things. After supper a splendid entertainment was given, consisting of solos, quartets and recitations, for the entertainment of the guests.

Thursday morning at 8:00 a. m. we convened at Hotel Coit for an auto ride over the city and surrounding country. On this ride we visited the home of Mr. Riddle, the millionaire coach manufacturer. Mr. Riddle, having a hobby of gathering clocks from all parts of the country, has in his home something like three hundred clocks, having gathered them from all parts of the world, some dating back to the fifteenth century. Mr. Riddle takes great

pride in showing his curios. One could not wish for a more interesting hour at any place than to visit Mr. Riddle in his home and have him relate the history of the various clocks in his possession.

Returning to the Hotel Coit at 10:00 a. m. the second session of the convention convened. At this session a paper was read by Mr. Charles Crain, of Tiffin, Ohio, on "The Renovating of an Old Cemetery." This was a very interesting and instructive paper.

Renovating an Old Cemetery

By Chas. Crain.

Mr. President and Brothers: Having been asked by our Executive Committee to prepare a paper upon "The Difficulties of Renovating an Old Cemetery," I hope that in my granting their request I may say something that will be of some benefit to some brother that is placed in the same dilemma that I have been at two different times. Instead of giving my paper the title of "The Difficulties of Renovating an Old Cemetery" I would prefer to call it "The Pleasure of Renovating an Old Cemetery" and the price you pay. Pleasures of all kinds must be paid for in some manner. Some call for cash payment, some demand heartaches as their toll, while others can be satisfied with nothing but loss of health and life. The pleasure of renovating an old cemetery demands no such severe toll, but still it must have its pay. The first question asked is where would you start in your work?

I would start with giving the whole yard a thorough cleaning and then see that it was kept that way. Allow no sticks, rubbish, scraps of paper or anything unsightly to lie around on the roads or lots. Have receptacles around the grounds to receive such litter. See that they are emptied when full, and have Saturday for garbage day when everything is cleaned up. As you make each move try to instill the importance of it upon your help. Visitors are careless in regard to throwing trash around. Keep your eye open and you will eventually see them do it. What should I do then—read the riot act? Oh, no; address them in a gentlemanly manner and explain what you are trying to bring about, and ninety-nine times out of a hundred you will make co-workers of them. Always bear in mind that you are beginning to revolutionize modes and doings, and to be successful you must have the co-operation of the lot owners. In times of troubles and trials you need all the friends you can get, and you are now started on the path that is beset with trials and troubles. I would keep the grass neatly mowed, trim around all monuments and markers. Would you do this to all lots? Yes, I would. What if people will not pay for the work, what then? You say: I would say, "Cut it."

One of the ingredients in renovation is mowing all lots. Here is where you must begin to use diplomacy, hypnotism or any other such power you may possess to get financial assistance from the lot owners. If you are a resident of the city in which your cemetery is located, your trials are not so great, but if you are a stranger in a strange land, there is work ahead of you, and lots of it. After you have kept the grounds nicely mowed for a couple of months make it a point to casually be passing when you see people at their lots, engage them in conversation, and finally get on the belt line that will lead you to the subject of the changed appearances of the ground; swing around to financial aid being needed from lot owners. Never make it a charge on a lot. Always call it a donation. Here is where you must get in your fine work. Play upon their pride as a citizen of the best city under the sun, and such a city must have its cemetery so kept that it will be a source of pride to all who see it. Follow this up and you will be surprised at the money you will receive. Do not get discouraged too easily or soon. Remember you need finances, and the lot owner must be the fount from which the stream is to flow.

There will be a great many lots you can find no one interested in. Just keep cool and your eyes open; you will eventually get the most of them. The lot owners that are interested in having a good cemetery will greatly aid you in locating derelicts. Some of you can get next to them by watching when you have burials. When I get an order for a grave I look on my sheet after the people are gone and see if anyone is donating towards care of lot. If not, in a short time after the funeral one of the most interested ones gets a letter setting forth our aim to make the cemetery the pride of Tiffin, and asking for a donation, sending them a statement with the letter. Results seldom fail. Stop selling lots under the old plan of virtually giving them away and no provision made for their future care. Convince your trustees of the necessity of selling all lots in the future under perpetual care plan. The people will kick at first, but as you make each sale be sure to clearly and thoroughly explain to the buyer the reason of the raise in price. Picture to him the fact that when he is gone and there is no one interested in the care of his grave he can rest assured that under the perpetual care plan it will always be looked after. He will at once see the beauty of the new plan and willingly pay the advanced price. Have your trustees decide upon a price, not less than 13 cents per square foot, upon payment of which you will place upon the perpetual care list any lot sold under the old system. Go to some of the most prominent lot owners and explain to them the plan upon which they may place their lots on the perpetual care list; go into detail with them about your plans for the future care of the cemetery, and if you are in earnest about your work, and show them in your talk with them that your whole aim in life is to make a modern cemetery of the graveyard, you will land them for your perpetual care list. Before you try to convince lot owners of the wisdom of the new plan, be sure that you, yourself, are thoroughly convinced. Have a perpetual care plate placed upon every lot going on the list. They advertise your new plan and bring business. I would not have anything too conspicuous. I prefer the one lying flush with the ground. See columns of Park and Cemetery.

My next move would be to line up all the roadways and clean them of all grass and weeds, making my main roads not less than sixteen feet in width. The cleaning of grounds, careful mowing and lining up of roads should all be done not later than the 20th of May. See the point? The majority of people visit the cemetery only before and on Decoration Day. The three moves you have now made in your work of improving will be the most pronounced of all. They are such that even the commonest ordinary mortal, without the least bit of love for the beautiful, cannot but notice the change. You have now got the people started to talking, and that is what you want. You are getting the people interested in you and your work. Lot owners are beginning to take more pride in their individual lots.

Later on you will begin to take up the matter of improving your roadways. Here is where you will reap the benefit of having your roadways lined up earlier in the season if it was done properly. In improving your roads, be sure to grade them so you will have crown enough for good drainage and a shoulder on each side to retain the material you use on the roads. If roads are improved with gravel, a light coat of clay spread over the top and then rolled in for a binder will do away with the objections so many have to gravel, on account of its being so long in packing.

If crushed rock is used for road improvements a top dressing of siftings, after being spread, if well watered, then rolled, will give an almost cemented road.

You now see that there is something else needed. As you walk around your grounds you feel in every fibre of your body, there is something lacking. What is it? I have my grounds clean, my grass well mowed, my roads being improved, but still I am not satisfied. Oh, now I know. Here is a bend in the road, with an unobstructed view across the whole grounds. Can I not find some change here that will fill that gap of something needed? I consult my shrubbery catalog, and after patient study I am able to see light. I plant a shrubbery bed there. Oh, what a change! Here a bush, there a vine, by the road a tree, and so on, and you have another surprise for the lot owners on the next Decoration Day.

Oh, what care you must take in your planting to

make it harmonize with the surroundings; how you nurse and coddle until it gets started properly. But you are well paid. You must be careful and not plant too many in one season, as your help is limited and inexperienced, and some is liable to be neglected. You must study your grounds thoroughly, and when you decide on a spot to be planted, make your bed in the fall, and when spring comes, and you plant, it will take hold immediately and do well. Oh, how it hurts when you want to plant and the soil is too poor to grow black-eyed peas! You console yourself with the fact that next season will see you all right. You start at once and save all your old sod, instead of throwing it away, pile it up in a heap, haul some grass clippings, throw them on, some sand also if convenient (not too much), and the next season will find you able to combat the cry of poor soil.

While you have been improving grounds, oh, how many eyesores are brought to your notice!—a regular thicket of what at one time had been shrubs on this lot, some pines trimmed up fifty feet, looking like an immense head of cabbage on a flagstaff on that lot, and you cannot get consent of the owner to remove them, "because father planted them." When you tackle that proposition, that is when you begin to think that if the late lamented Robert G. Ingersoll were on earth, and in your place, he would change his mind and say there is a hell.

When you are improving your grounds you must not forget the fact that there is a crying demand from the office to give it some attention, and it surely needs some. Here you have several thousand burials in your grounds and not a scratch of a pen showing such a thing. Oh, ye gods and little fishes! Where shall I start? How shall I begin? Oh, what's the use of making records anyhow? They have run along all this time without any and seemed satisfied, and I will be hanged if I am going to all that trouble. Let the family keep track of where their folks are buried. Just about that time a little voice seems to whisper to you—oh, how like magic those words! "You are a member of the Association of Cemetery Superintendents and Officials, and as such it is your duty to do anything and everything that is needed to make your cemetery modern in every respect." How you then hustle. You send to R. J. Haight, Chicago, Ill., and tell him to send it quick, one record book for burials, one lot book, one index book for burials, and one index book for lot owners.

Start immediately to put in the book a record of every burial you make. How about the burials that have been made in the past? There is another way to take care of them. Take your lot book and put every lot down, of course taking each section by itself. Inscribe in the book, owner of lot, number of lot, and number of section. You will find in the book space for diagram of each lot. Make diagrams of lot, by scale, and go to the lot and note graves on it, and mark those graves on the diagram exactly as on lot, number of graves, and in proper place on page give name of each person buried and number of grave. If grave has no marker to it, you have some work to do. Make a drawing of the lot with graves on and numbered on a sheet of paper and mail to lot owner, with request to insert name of person in each grave, at the proper number. Very often you will be unable to locate owner. So, often I have been able to trace owner in course of time, through information derived from other lot owners. If you have any love for your work, the more difficult it may seem to get the record of unknown graves, the more determined you are going to be to get them. When you make a burial on a lot be sure and mark it on the diagram of that lot according to scale. You can then always tell a person at the office the exact condition of their lot, and save many, many steps. After having made diagrams of all lots and burials thereon, the next step is to index all known burials. This index book will pay you several hundred-fold for the labor required to compile it. There are several different systems of keeping records of burials, and for a superintendent who has no office help I consider the R. J. Haight system the simplest and best.

You have now started the graveyard to assume the appearance of a modern cemetery, and the hardest work is over. You have now educated the lot owners to your ideas, and you are beginning to see the results of your labors. How many, oh, how many, are lacking a respectable building

for an office, waiting or rest room and toilet accommodations! You must fight until you get them. If you are easily discouraged, are not a good fighter, and able to hang on like a bulldog to get things you know are needed, do not attempt to modernize a graveyard. If it is an association cemetery there is always one member on the Board of Trustees that is going to stand at your back and help you fight, but if a municipal cemetery, except in rare cases, you should be given a through ticket to heaven and not be compelled to get a stopover check for purgatory.

I had a little experience in municipal cemeteries. In four years I had seven different directors over me. There was a good chance to modernize anything then, wasn't there? How nice to be compelled to go to a professional politician for his sanction to do certain things to improve the cemetery, when you could walk him in the grounds for three minutes and he could not find his way out again! Still he has the power to say you cannot do this or that.

Be sure and subscribe for Park and Cemetery. There is not an issue of it but contains some information, to you, worth many times more than the subscription price. Study your nursery catalogs. I did not say read them, but study them. The dreary days of winter is the time for you to acquire knowledge and improve your mind. Read carefully descriptions of the various shrubberies and see where they will best harmonize with surroundings. Do all your planning, as far as practicable, in winter; then when the robin red breast appears in the spring, no time need be wasted and should not be. Don't be afraid to fill up some sunken graves because there is no one left to pay for the work done. What you lose in money you gain fourfold in the appearance of the cemetery. Remember you are now running a cemetery, not a graveyard. Gradually straighten up all markers and head stones, collect where you can but straighten up anyhow.

Do not be afraid to do some little favor for lot owners.

Do not fail to be courteous and gentlemanly to all.

Do not forget, soft answer often turneth away wrath.

Do not forget that all who enter your gates are equal, and often the biggest heart and tenderest feelings are under the ragged coat.

Do not forget that you often come into possession of family secrets that should be as sacred as though you were a religious confessor. And, last of all,

Do not fail to attend every meeting of your Cemetery Superintendents and Officials Association.

Brothers, I thank you for your kind attention.

Another paper by Mr. George Gossard, of Washington C. H., Ohio, was read. Mr. Gossard being a delegate to the national meeting of Cemetery Superintendents at Buffalo, N. Y., September, 1913. This was a very interesting paper covering the entire work of the national meeting, bringing out many good points for discussion of interest to cemetery men. This concluded the program. The following officers were then elected for the year 1914 and 1915:

President—J. A. Reed, superintendent of West Lawn Cemetery, Canton, Ohio.

Vice President—J. C. Dick, superintendent of Riverside Cemetery, Cleveland, Ohio.

Secretary and Treasurer—E. A. Sloan, superintendent Marion Cemetery, Marion, Ohio.

After choosing Dayton, Ohio, as the place of meeting in June in 1915, the convention closed. All thought we had one of the best meetings that had been our privilege to attend up to this time.

BEAUTIFUL CHAPEL AT GREENWOOD CEMETERY

The new chapel recently completed at Green-Wood Cemetery, Brooklyn, N. Y., is one of the most beautiful structures of this character ever built in the United States. It consists of a chapel, chancel and sacristy. The congregational part of the chapel is octagonal, flanked by four turrets. The chancel is rectangular, its inside dimensions being comprised in the space between two of the turrets of the building. There is accommodation for over 100 persons in the congregation. The foundations rest on concrete piles. The main skeleton is of reinforced concrete faced outside with buff Indiana limestone above a base course of granite. All the roofs and domes are of limestone. The vertical surfaces on the interior of the building, the vaulting of the turret passage ways, and vaulting of the transepts are all faced with the same material. The vaulting of the chancel and the vaulting carrying the lanterns are faced with imitation stone to match the limestone. The floor of the chapel is built of Istrian marble in large slabs with border of verde antique and black and gold marble. The floor of the chancel is of Istrian, verde antique and black and gold marble in slabs and mosaic. The altar and altar steps are of veined statuary marble. The toilets and sacristy (located in the turrets) have floors of Istrian marble. The toilets have wainscots and partitions of Istrian marble. The sacristy has a panelled wainscot of quartered oak. All doors and all incidental cabinet work are of quartered oak, and the altar rail, clergy stalls and bishop's chair are of carved quartered oak. These are the approximate dimensions: Exterior, measured along longitudinal axis, 65 feet; exterior, measured along transverse axis, 49 feet; height from grade to top of cross, 88 feet; from grade to base of lantern dome, 61 feet; from grade to base of balustrade, 37 feet.

The architects were Warren & Wetmore, of New York.

The windows have for their theme "The Resurrection" as depicted in incident and symbol in the life and parables of our Lord.

Mediaeval in treatment, richly prismatic in color, they exemplify the strength and vitality of the ancient windows, built by reverent hands when the art was at its height before it was corrupted by the commercial spirit of the decadence.

No enamels have been employed, all the color is in the glass itself, much of which is made in layers of different colors, and then etched with acids to produce the desired contrast, after the manner employed by Albrecht Dürer and others of the ancient glass artists whose work has stood the test of centuries.

A window properly made is the most



RECENTLY CONSTRUCTED CHAPEL AT GREEN-WOOD CEMETERY FOR THE USE OF LOT OWNERS.

lasting form of art known. Time and atmosphere have dealt gently with glass, softening the incongruities of the primitive artists and enriching the colors.

The sanctuary window commands the entrance, and shows Christ rising from the open tomb. Below are the keepers who became as dead men, their brutal strength vanquished, and on either side stand the Archangels Raphael and Michael, but the gentle and composed figure of our Lord is the dominating presence of the group. This subject, ever the most difficult to portray in an art where action is undesirable, has been so handled that all action is restrained, as in all the others of the series, and the spiritual truth is the first and the most lasting impression.

"So they went and made the sepulchre sure, sealing the stone, and setting a watch."—*St. Matthew 27:66*.

"And behold there was a great earthquake; for the angel of the Lord descended from heaven and came and rolled back the stone from the door." "And for fear of him the keepers did shake, and became as dead men."—*St. Matthew 28:2, 4*.

"And behold two men stood by them in shining garments."—*St. Luke 24:4*.

"Now is Christ risen from the dead and become the first fruits of them that slept."—*I Corinthians 15:20*.

The building of a suitable chapel at Green Wood has been considered since 1849, but it never reached a climax until

April, 1910, when an appropriation was made not to exceed \$250,000.

It will be open daily and will be at the disposal of all lot owners who desire to have funeral services in the cemetery grounds, a small charge being made for the use. It is very suitable for this purpose, being equipped with a pipe organ and all other fixtures.

Hot Springs has the only exclusive negro cemetery in the state of Arkansas. It is known as Park Hill Cemetery and is located in Euclid Heights Addition about eight blocks from the end of Malvern avenue car line, near Ash street, and was opened recently by the National Cemetery Improvement Company. The officers of the company that built the cemetery are: W. E. Jones, of St. Louis, president; R. R. Cravens, of Fort Smith, vice president and treasurer; and Fred L. Stratton, of Nashville, secretary.

The Greenwood Cemetery Association has recently been organized at Hot Springs, Ark., for the purpose of beautifying the cemetery and the members are now working energetically to that end. The officers are: Col. J. P. Henderson, president; F. A. Bradfield, treasurer, and J. R. Housley, secretary. A movement is also on foot to form a similar association for Hollywood Cemetery at Hot Springs.

COURT DECISIONS ON PROHIBITING INTERMENTS

(Continued.)

II.

Counsel for appellants present a counter contention to that presented by counsel for respondents in the preceding paragraph of this opinion, namely; although it be conceded that the legislature of the state might have the power and authority to enact a valid law prohibiting the Union Cemetery from burying dead bodies therein, nevertheless, Kansas City had no such authority under special provisions of her charter or under the general welfare clause thereof, and therefore the ordinance complained of is null and void.

The special charter provisions so far as they are material and relied upon by counsel for respondents, are as follows:

"The municipal corporation known as Kansas City, * * * may exercise all municipal, incidental and business powers necessary or which may be deemed expedient and necessary to maintain the public peace, protect property and promote the public welfare, and preserve the health of the inhabitants of the city, whether such powers be expressly enumerated herein or not; and may have and exercise within the city limits * * * all governmental and police powers, subject to the limitations prescribed by the constitution and laws of this state and the United States."

Charter of 1909, Article 1, Section 1, paragraph 13.

"* * * The mayor and common council shall have power and authority, by ordinance * * * to secure the general health and safety of the inhabitants by any necessary measure, * * * to declare, prevent and abate nuisances on public or private property, and the causes thereof."

Charter 1909, Art. 3, Sec. 1, paragraph 16.

"* * * The common council shall have power to pass, publish, amend and repeal all such ordinances, rules and regulations not inconsistent with the provisions of this charter or contrary to the laws of the state or of the United States as it may deem to be expedient or necessary in maintaining the peace, order, good government, health and welfare of the city, its trade, commerce, manufactures, or that may be necessary and proper to carry into effect the provisions of this charter."

Charter of 1909, Art. 3, Sec. 1, paragraph 41.

If it were not conceded that Union Cemetery was in point of fact a nuisance and detrimental to public health, then under the far-reaching grants of power conferred upon Kansas City by these charter provisions, it would be difficult to conceive upon what solid ground this contention could rest.

Those provisions in express terms authorize that city to exercise all municipal

power "necessary to promote the public welfare, and preserve the health of the inhabitants of the city;" that by ordinance the city shall have authority * * * to secure the general health and safety of the inhabitants * * * to declare, prevent and abate nuisances on public or private property," etc., and the "common council shall have power to pass, publish, amend and repeal all ordinances * * * as it may deem to be expedient or necessary in maintaining the peace, order, good government, health and welfare of the city," etc.

The language of these provisions is so plain and definite in meaning that they are not susceptible of construction.

They simply mean what they say, that the city has the power and authority to abate any nuisance or do anything within its corporate capacity to preserve the health and welfare of the city. This would clearly authorize the passage of the ordinance in question, and it has been so held in numerous cases.

Campbell v. City of Kansas, 102 Mo., 326, 244, 350, 10 L. R. A. 593, 13 S. W. 897; Laurel Hill Cemetery v. San Francisco, 152 Cal., 464, 93 Pac., 70, 14 A. & E. An. Cas., 1080, 27 L. R. A. (N. S.) 260:

Affirmed in

Laurel Hill Cem. v. San Francisco, 216 U. S., 358, 54 L. Ed., 515; Odd Fellows Cem. v. Same, 140 Cal., 226, 73 Pac., 987; Kincaid's appeal, 66 Pa. St. 411, 423; People ex rel, Cem. Assn. v. Pratt, 129 N. Y., 68, 72, 29, N. E., 7; Coates (Stuyesant) v. New York, 7 Cow., 588, 604; Young v. Board of Comrs., 51 Fed., 585, 592.

Also see:

Board of Commissioners v. Yound, 59 Fed. 96, 1, c. 109; Charleston v. Baptist Church, 4 Strob. L. (S. C.) 306, 1 c. 310; Commonwealth v. Fahey, 5 Cash (Mass.) 408, 1 c. 132; Page v. Symonds, 63 N. H. 17 1 c. 20; Craig v. Pres. Church, 88 Pa. St. 42, 1 c. 52.

In addition to this, the general welfare clause of the charter which is practically the same in all the charters of the cities of this state, was ample authority to the council to pass said ordinance.

St. Louis Gunning Company v. St. Louis 235 Mo. 99.

Council for plaintiffs concede that this ruling might be sound if it was not for the fact that the charter of the Union Cemetery is an Act of the legislature, and that according to the express provisions of paragraph 41 of section 1 of article 3 of the charter of 1909, before quoted, where it is expressly provided that "the common council shall have power to pass, publish, amend and repeal all such ordinances, rules and regulations *not consistent* with the provisions of this charter or *contrary to the laws of the state* or of the United States as it may

deem to be expedient or necessary in maintaining the peace, order, good government, health and welfare of the city."

That being true, it is argued that in order to repeal the charter of the Union Cemetery, the ordinance in question must of necessity be inconsistent with and contrary to the provisions thereof, which as shown is an act of the legislature, or a law of the state. And being so inconsistent with and contrary to said law of the state, it is contended that under said provision of the city charter, the ordinance and not the charter of the Union Cemetery, which is an act of the legislature, or a law of the state, must yield and give way.

This argument is more plausible than sound, for while it is true the charter of the Union Cemetery is a special act of the legislature, yet it has no more force and effect than if it had been incorporated under the general corporation laws of the state, and if burials could by ordinance have been prohibited in the latter case, then I am unable to see any good reason for holding that it could not have been prohibited in the former.

The courts consider the substance and not the letter of the law, when enforcing its provisions. By abating the nuisance, if one it is, the charter of the cemetery is not repealed, but the further burial of dead bodies therein is prohibited, because of the changed conditions of things; that which was formerly harmless has become dangerous to the public health of the city.

This is but the exercise of the police power which neither the city or state can surrender or bargain away.

All the authorities so hold.

St. Louis Gunning Co. v. St. Louis, Supra.; Mugler v. Kansas 123 U. S. 623; Slaughter House Cases, 111 U. S. 746.

Nor can either of them preclude itself from enacting laws forbidding burials in places when they constitute a public nuisance.

Brick Pres. Church v. New York, 5 Cow. 538.

Board of Commissioners v. Young, 59 Fed. 96.

We are, therefore, of the opinion that this contention of plaintiffs is not well taken.

III.

Returning to the question previously stated: Is the ordinance complained of reasonable? That is, was it enacted for the preservation of the public health of Kansas City?

We have with great care and with much pains read the voluminous record in this case, covering about five hundred and fifty pages, and have carefully set out the substance of the evidence introduced by both parties bearing upon this question, as well as that touching the manner in which the

cemetery was managed and controlled, and after a careful consideration of the weight thereof, we have reached the conclusion that this ordinance was not enacted for the purpose of preserving the public health of the city, but was passed at the instigation and request of a lot of real estate agents, land owners and speculators, who think that this cemetery stands in the way of the expansion and development of Kansas City in that direction, and especially is that true since the location of the New Union Depot has been definitely located in that vicinity.

In the first place the complaints of the living were as silent as those of the dead, as to the unsanitary condition of the cemetery until the railroads of the city finally determined to locate the Union Depot in the vicinity of this cemetery. Since that time, however, the question has been agitated, not by the citizens generally of Kansas City, by or through their representatives, neither in its municipal capacity nor by its Board of Health, which has the most ample authority under the charter of the city to investigate and abate, either by direct action or by appeal to the common council, any and all public or private nuisances or other matters, which do or may effect the public health of the city, but by those citizens who have discovered in recent years, that this cemetery is and has retarded the growth and expansion of the city in the line of their property, and thereby and in consequence thereof, the values of their property have not increased in the degree in which they think they would have done had it not been for the presence of the cemetery.

That class of citizens, and they alone, for purely commercial purposes, and for anticipated financial advantages, petitioned for and pressed the passage of this ordinance.

Not even the Board of Health or Mr. Ward, the councilman from that ward, whose sworn duty it was to look after and preserve the public health of the city, knew of or ever heard of any deleterious effects the cemetery ever had upon the health and welfare of the city, until the petitions asking for the abolition of this cemetery was by said interested parties filed with the common council. And still more strange no member of said board appeared or was subpoenaed as a witness in this case, to testify that the cemetery was deleterious to public health, which unquestionably they would have done had that been true.

While Mr. Ward, the councilman from that ward, did testify, yet he in express words said he introduced said ordinance in the lower house and voted for its enactment because the citizens of his ward, residing in that vicinity petitioned him to do so, and not a word of evidence escaped his lips tending to show that he in-

troduced said ordinance or voted for the same from a sense of duty that it was beneficial to public health, thereby clearly leaving the irresistible inference, that he did so because it was for the promotion of the financial and commercial interests of his constituency.

Moreover, there is not a word of testimony preserved in this record which tends to show that this cemetery was in fact deleterious to public health.

All of the witnesses who testified as to this question in behalf of the defendants, invariably stated that such *conditions might* produce disease, death and destruction, but not one of them stated as a fact that this cemetery gave off any bacteria or deadly germs, or that any of the pools or ponds mentioned in the evidence contained a single germ, or that the water, rats, mice or any domestic animal ever carried or distributed germs of that character over the area of the city. Nor does the evidence show that a single case of sickness, disease or death was caused by the presence of said cemetery. In truth, no attempt whatever was made by defendants to show any such facts, but upon the contrary, what little evidence there was introduced by plaintiffs, tended to prove the contrary, that is, there were not so many cases of contagious and infectious diseases reported to the Board of Health from that vicinity as were done from other localities of the city.

Under this showing, we have no hesitancy whatever in holding that said ordinance is unreasonable, oppressive and tyrannical. For in order to financially benefit a few property owners and speculators in that vicinity, they, through the innocent action of the common council, are ready and willing to sacrifice the final resting place of those stalwart men and women who made Kansas City what it is, and without whose efforts the city would not be worth mentioning. They built the city, developed its commerce, and made Kansas City what it is. They also, as a part of their life's work, created and adopted this cemetery as a final resting place for their ashes, which in anticipation, was as near and dear to them in life as were the residences in which they lived, the stores in which they bartered and sold, the factory in which they labored and the counting houses in which they exchanged values.

The city of the dead, which is honored and revered by all civilized people, including the cost of the interments and expenses of monuments erected to their sacred memory, to say nothing of the cost of preserving and beautifying the graves, I dare say, has cost the deceased and the relatives and friends, not less than six or eight millions of dollars, to say nothing of this wholesale, unholy desecration—a financial destruction of values, which would far excel the financial benefits these peti-

tioners could ever hope to receive therefrom, even though their fondest hopes should be crowned with success.

In the case of the American Tobacco Co. v. The City of St. Louis, *supra*, where the benefits to be derived and the damages which would have been sustained by reason of the enforcement of the ordinance therein mentioned, were far greater than the benefits here to be received and far less than the damages that would be here inflicted, yet by these reasons, among others, the court en banc unanimously held the ordinance therein mentioned, as unreasonable, oppressive and void; and by parity of reasoning and for greater considerations existing in this case, we believe and hold that this ordinance is unreasonable and oppressive and should for that reason be declared and held to be null and void, which is accordingly done.

Judge L. C. Slavers appeared in this court as counsel for certain lot-owners in the cemetery, in the capacity of interveners I suppose, but who were not represented in the court below, and asks that this court find and decree that the cemetery owes certain duties to preserve and beautify the cemetery and the graves thereof, and that this court require the officers thereof to provide and set apart a fund sufficient, and out of which said cemetery may be preserved, cared for, and with which to beautify the graves therein.

In answer to that request we will state that while there seems to be much merit in this request, as incidentally appears from this record, yet no such question was presented by the pleading or established by the evidence or considered by the trial court, and for that reason, however desirous we might be to afford the relief thus prayed, yet it is perfectly apparent that under the present condition of the pleadings and evidence in the case, we have no jurisdiction to so do. Such a holding would clearly deprive the cemetery company of its property without due process of law, within the meaning of both the state and Federal Constitutions.

Much of the evidence introduced in this case and previously set forth in this opinion, bears upon this question, which may and should justify, on the part of the city and lot-owners, stricter regulations, better preservation and more suitable care and attention, both to the grounds and graves therein, than has heretofore been shown them, but in no sense does or should that evidence which constitutes the great bulk of this record, warrant the city in abolishing the cemetery outright, which is practically done in this ordinance, if it is to stand. So hold may of the cases cited.

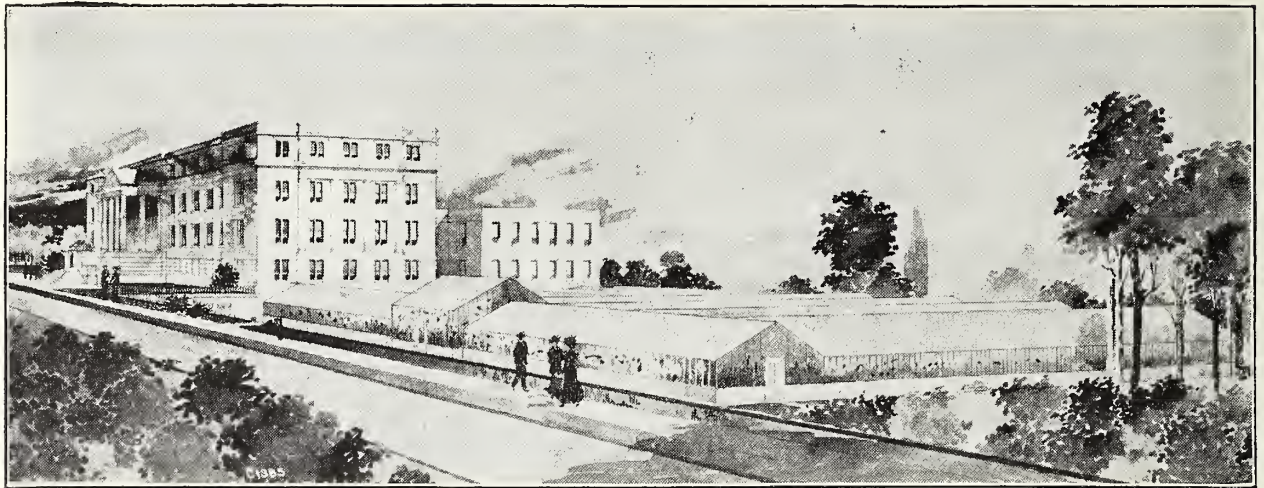
For this reason we decline to pass upon this question one way or the other, in order that if these parties desire to have

that question adjudicated, they may do so by instituting in the proper court, proper proceedings for that purpose.

We are, therefore, of the opinion that

the judgment of the Circuit Court should be reversed with directions to enter judgment in favor of the plaintiffs, enjoining Kansas City and its agents and officers

from interfering with burials in said cemetery and from putting in force the provisions of said ordinance; and it is so ordered.



PROPOSED NEW PLANT INDUSTRY BUILDING, IOWA STATE COLLEGE.

NEW GREENHOUSE AT IOWA STATE COLLEGE

The rapid growth of the floral industry in Iowa coincident with the development of its larger towns and cities, as well as the increasing attention being paid in this state to truck crops has received recognition from the Iowa state legislature which authorizes the building of greenhouses and a laboratory building to cost a total of \$50,000 at Iowa State College at Ames for experimentation and instruction along these lines.

Ground has been broken for the new building to be known as the plant propagation building. Here, beside instructional courses in the handling of cut flowers and ornamental plants, students will learn green house management, and will work with the faculty in investigating the diseases of greenhouse plants, the use of fertilizers, insecticides, and other floral problems. All agricultural students will also carry on work in this building in plant propagation, seed testing and plant breeding.

In its greenhouse work, the college will co-operate with some of the largest greenhouse plants in the Mississippi valley. Iowa now has some large plants. At Charles City 50,000 square feet of glass is devoted to American Beauty roses. Davenport has 100,000 square feet devoted exclusively to cucumbers. Des Moines has 100,000 square feet in cut flowers. Council Bluffs has two large plants, one with 350,000 square feet in vegetables, and another, the largest plant between Chicago and the coast, has 650,000 square feet in cut flowers and truck garden crops.

The total glass area in Iowa is nearly two million square feet. The returns per square foot under glass are reported at from 30 cents to 50 cents.

The intensive types of farming in Iowa have created a demand for instruction and information along truck crop lines. With the aid of the new greenhouses, the college will conduct extensive experiments in onion culture and other lines. In Iowa the pickle

industry is assuming large proportions, and growers have also found that the corn belt soil and climate is well adapted to a heavy tonnage of cabbage. In Iowa potatoes from the fourth largest crop.

Because of the importance of these truck crops, the college has placed Prof. A. T. Erwin on full time in charge of exhaustive experiments. Prof. H. C. Volz, of Michigan Agricultural College, has been engaged to teach truck crops and floriculture, and Prof. Frank C. Culley, of Harvard University, will this year begin enlarged courses in landscape gardening. Prof. C. L. Fitch, potato expert, formerly of Colorado, is extension worker in truck crops, and will carry to the growers of the state the results of the experiments and investigations made by the college. He is also interested in co-operative marketing.

With the new equipment, Iowa State College will stand in a favorable position to do high class work in these special branches of horticulture.

CEMETERY SUPERINTENDENTS ST. LOUIS CONVENTION

The program for the annual convention of the American Association of Cemetery Superintendents to be held at the Planters Hotel in St. Louis October 6, 7 and 8, has been partially completed, although it will be published more in detail in the September issue of PARK AND CEMETERY.

President Matthew P. Brazill, of St. Louis, who is also chairman of the convention committee, writes that it will be Festival Week in St. Louis at that time and there will be a large number of visi-

tors in the city to attend the Veiled Prophets' procession and ball. He also advises all members to make an early application for rooms.

The rates at the Planters Hotel are as follows:

PLANTERS' HOTEL.

European Plan.

DAILY RATES.

Single rooms, without bath, for one person, \$1.50 and \$2 per day.

Single rooms, with bath, for one person, \$2.50, \$3, \$3.50 and \$4 per day.

Double rooms, without bath, for two persons, \$1.25 and \$1.50 each person per day.

Double rooms, with bath, for two persons, \$1.75, \$2, \$2.50 and \$3 each person per day.

Where over two persons occupy same room \$1 additional charged for extra person.

We do not in any manner operate on the American plan, but we serve table d'hôte meals at the following prices: Breakfast, 75c; luncheon, 60c; dinner, \$1; club breakfasts, 30c to \$1.

THIRD FLOOR RATES.

(With Bath.)

Single room, \$5 per day. Double room, \$7 per day.

The program as it stands at present is as follows:

TUESDAY, OCTOBER 6.

10 a. m.—Address of welcome by the Mayor of St. Louis. Response by James Currie. President's address by Matthew P. Brazill. Appointment of committee. Secretary-treasurer's report. Half hour with secretary.

Afternoon—Papers, discussions, question box.

Evening—Viewing the Veiled Prophets procession or attending the grand ball if tickets are obtainable.

WEDNESDAY, OCTOBER 7.

Forenoon—Visiting the principal parks and cemeteries and other points of interest.

Evening—Papers, discussions, question box, nomination of officers.

THURSDAY, OCTOBER 8.

Forenoon—Take trolley cars for the Missouri Botanical Gardens, where officers

ELLIOTT GROVE CEMETERY, BRUNSWICK, MO.

The accompanying photographs illustrate views of Elliot Grove Cemetery at Brunswick, Mo., of which Louis Benecke is president. The cemetery is located a half mile north of the city limits of Brunswick in Chariton county, Mo. It was organized and incorporated in March, 1881, by fifteen citizens of Brunswick for the purpose of providing a suitable permanent burying ground that would reflect credit upon the community.

The association purchased 24 acres of ground, laying it out in six divisions, each

containing 36 blocks, and each block four lots. A block is 40x40 feet, the lot 20x20 feet and the sub-lots 10x5 feet.

Of the original fifteen charter members or incorporators there are now only six still living. Mr. Benecke was secretary from the date of organization and has been president since 1910. He says:

"We have never declared any dividend, and it is our intention not to declare a dividend, as we did not enter into this for the purpose of making money. Hence all proceeds are either used for beautifying



PLANTERS' HOTEL ST. LOUIS.

and guides will show members around and explain the various plants, etc.

Noon—Lunch at the Gardens.

Afternoon—After lunch a session will be held for the election of officers and to attend to any unfinished business. Adjournment. Back to the hotel by street car.

the grounds or invested at interest so as to establish a permanent fund for the maintenance of the place after all lots are sold and revenue from the sale of lots has ceased. The photographs sent indicate that the ground is slightly sloping and with all native timber eradicated and evergreen trees planted in this place, we have a most beautiful and solemn forest inviting rest from the turmoil or strife of life as it is.

FRONT COVER ILLUSTRATION.

The illustration of iron fence and gates shown on front cover is a design made by The Stewart Iron Works Co., Cincinnati, Ohio. It is a style they have installed at many leading parks throughout the country and is especially desirable in that it combines the greatest strength and durability with neatness and symmetry of design. This fence can, of course, be made in different heights and of lighter or heavier material, as the case requires, but photograph from which illustration on front cover is taken carries the following specifications:

Height when set, 5 feet, constructed of $\frac{3}{4}$ -inch square pickets set diagonally, spaced 5 inches on centers, with milled points. Rails are $2 \times \frac{5}{8}$ inches, Stewart's patent 3-rib steel channel, which is claimed by them to be the best fence rail on the market, having extra metal added where pickets are caulked into the rail, thus producing a greater strength and solidity between picket and rail. Line posts are 1 inch square, with wrought malleable spear tops, heavy plate on bottom and set 2 feet 6 inches in ground. Braces are $\frac{3}{4}$ inch square, with heavy bases and set same distance in ground as line posts. Has heavy adjustable center support $\frac{3}{4}$ inch round and 2 feet long, with heavy bottom plates supporting each panel of fence in center, thereby preventing possibility of panels sagging at any time during life of fence. All foundation bases are adjustable as well as the line posts and center supports. Adjustable connecting caps are provided at end of each panel to allow for contraction and expansion of panels due to hot and cold weather conditions. Double drive gates are a beautiful design with ornamental scroll work and three rails with substantial bracing, and of proper height to conform with height of fence.

As a suitable enclosure and gateway entrance for park, playground or cemetery this style of fence would be hard to beat and is a design that will appeal to the most exacting and discriminating.



The board of trustees of Oakwood Cemetery at Alton, Ill., have let the contract for the construction of a concrete driveway in the cemetery 1,100 feet long and 12 feet wide.



ELLIOT GROVE CEMETERY, BRUNSWICK, MO.

MODERN BITUMINOUS ROAD CONSTRUCTION

Address by S. D. Foster at American Road Congress.

The subject of bituminous construction, the one upon which I have been invited to speak, is such a broad one, and one upon which so much has been said and written, that I will not attempt to discuss its merits, compare it with other types of pavements, or take up the correct method of maintenance after construction, but will deal entirely with the two types of construction most commonly used by engineers today, viz., the bituminous road constructed by the penetration method, and the bituminous road constructed by the mixing method.

Speaking generally of the two methods of construction, and taking into account the hundreds of miles of bituminous roads already constructed, I feel safe in saying that there is probably no other type of construction about which there is less absolute information concerning the physical and chemical characteristics of the bituminous materials and the road metals which will bring about the best results. There is no type of road construction which requires more care or more consistent expert supervision and inspection than that involved in the use of bituminous material, and until such time as we are able to thoroughly educate and instruct efficient and capable engineers and inspectors in this type of construction, the same will remain in an experimental stage. In general, also, I would state that the preparation of the subgrade, the drainage, and the foundation are extremely important factors in the success of bituminous pavements, and, unless properly constructed, will bring about their destruction. I might state at this time that, to my mind, the experimental stage in foundation work has been passed, and that for the ordinary country traffic to which the average highways must be subjected an 8-inch telford foundation or a 5-inch cement concrete foundation, when properly constructed, is sufficient for the carrying of any class of pavement which we may desire to place thereon.

Presuming that the foundation has been properly completed, I do not believe that I can better describe the method of building thereon a bituminous penetration pavement than by quoting from the Pennsylvania State Highway Department's specifications, to-wit:

"Upon a suitable foundation there shall be spread a layer of broken stone of such quality as may be suitable. The stone shall be broken in fairly uniform and regular cubes, free from dirt or dust, and comparatively free from flakes or splinters. The stone shall be of such size that they will pass a 1½-inch circular opening and over a ¾-inch circular opening. This layer of stone shall be of such thickness that, when it has been rolled with at least a 10-ton

power macadam roller, it shall have a thickness of 3 inches.

"The surface must be firm and, when completed, correspond to the grade in proper crown and cross section. Upon each square yard of this surface shall be evenly spread, by means of an approved pressure distributor or fan-spout sprinkling pot, from 1½ to 1¾ gallons of bituminous material, of a penetration from 90 to 120.

"The bituminous material shall be heated to a temperature of approximately 350 degrees Fahrenheit. Immediately thereafter, sufficient dry, dustless screenings, passing a ½-inch screen, shall be spread in sufficient quantities to evenly cover the entire surface of the road and take up excess bituminous material. The road shall then be rolled until firm and a smooth surface results and conforms to the longitudinal and transverse section.

"While the surface is clean and warm, a seal coat of bituminous material of proper consistency to be flexible when cold, shall be spread one-half gallon to the square yard. It shall be applied while at a temperature of 350 degrees Fahrenheit, and while the bituminous material is in a liquid state there must be spread a top dressing of clean, dry, torpedo sand, or dustless stone chips, in sufficient quantities to cover the entire surface of the road and take up any excess of bituminous material.

"Immediately thereafter the road shall again be thoroughly rolled; if so directed, the stone, stone chips and sand must be heated. In rolling, the roller should start from the side line and work toward the center, and, in all cases, continued until thorough compression is secured."

By following these instructions, a first-class penetration pavement can be constructed, but, in the experience of the department, the engineer has frequently found the several conditions which I am

about to enumerate, any one of which, escaping his attention, will be bound to produce a weak spot in the pavement. The first of these conditions is the presence of water in the foundation, due either to wet weather springs, or to rainfall after the foundation has been placed. This condition results in water working up through the telford stone and thence through the stone comprising the aggregate of the pavement. It attacks the bituminous material, which, losing its binding powers, readily disintegrates the pavement. Another condition, often occurring, is due to the contractor not napping his telford properly and attempting to bring the same to the proper crown and cross section by the use of stone spalls. These cannot be thoroughly rolled into the foundation, and when the stone which is to be treated with bituminous material is hauled on the road, the spalls continually work up through the smaller stone and produce weak places in the finished pavement.

The use of soft stone, especially in districts where local stone is used for road

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In November, 1912, Supt. Jas. Y. Craig wrote:

"Our continual experience with Tarvia has been very satisfactory and our pavement, some of which has been laid five years, is in very good condition and the cost of maintenance has been very small, having used about 20 barrels of "Tarvia B" for resurfacing and repairs."

Note that this has been at the rate of one barrel to a thousand square yards of five-year-old roadway for repairs. It is on facts such as this that we base our statements that Tarvia costs nothing, inasmuch as the saving in maintenance expense more than balances the price of the Tarvia.

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purposes, furnishes another problem for the engineer. Soft stone, when placed in the pavement and rolled, may seemingly be treated with bituminous material and thus cover up all cracks or fractures which may have been made by the initial rolling, but the rolling of the pavement, both after the first application of the bituminous material and by the final compacting of the same, will again fracture more or less of the stone aggregate. These fractures, occurring as they do after the application of the bituminous material, will be void of binding qualities and the stone will immediately start to break down through continued rubbing, one piece against the other. This, in itself, produces dust and allows the moisture to penetrate into the pavement, again causing destruction of the binding powers of bituminous material. In addition, this soft stone is readily worn away by passing vehicles and serves to shorten the life of a bituminous pavement.

Stone crushed in quarries, where there is an abundance of stripping or where there is a stratum of soft stone, or stone hauled upon the highway and allowed to stand for several days subject to clouds of dust from passing vehicles, becomes covered with a fine film of dust particles. Stone of this character, when placed in the road and subjected to the application of bituminous material, cannot be properly bonded, inasmuch as the bituminous material, while covering each stone, is unable to directly bond itself to the stone proper, for the dust layer covering the stone will act as a barrier, and, while the bituminous material will, or may, hold the stone in place in the pavement, it will not produce the proper bonding of one particle of the stone with another. Stone with a smooth, non-porous surface will prove a failure on account of the inability of the bituminous material to adhere thereto. Wet or damp stones result, likewise, in the bituminous material not obtaining any adhesion. It is well also to avoid those classes of stone which do not crush in a cubical or near-cubical shape. Stones that break or crush in splinters will not take the compression and will not interlock themselves one with the other in the manner most desired in accomplishing first-class results.

The selection of a suitable binder is a most important matter, requiring skill and judgment. There is no one "best" product, and the selection must be governed by a number of conditions. The principal features to be considered in this connection are the characteristics of the stone to be used; the manner of applying the bituminous cement, whether the material is to be applied hot or cold, by means of distributors with or without pressure, or by pouring pots; the quantity and character of traffic to which the road will be subjected; climatic conditions; the cost of bituminous material, and the probable cost of application.

Inasmuch as the results to be obtained are the securing of a compact, uniformly solid paving surface impervious to water, it is obvious that continued and experienced supervision and exceptional care should be employed. Equally important with the selection of the bituminous material is the care with which it must be heated, as the slightest overheating will burn the product and render it unfit as a binder. It has been my experience that no successful results can be accomplished unless the inspector keeps continually with him on the work a thermometer with which to test the temperature to which the bituminous cement is being subjected. Another frequent failure occurs through lack of uniformity in the quantity of bituminous material applied to the stone and is caused by crude or careless applications, and cannot bring about proper results. The hand pouring should be supplanted by suitable mechanical distributors which will apply the bituminous cements under pressure and insure thorough penetration and a more even application.

In enumerating the various mistakes which so often occur in penetration work, I would say that the cause of failures can be readily traced in many instances to faulty plans and specifications, lack of care and judgment in the selection of materials, poor and inadequate equipment with which to carry on the work, inexperienced labor for both skilled and unskilled service, continuation of work during unseasonable or inclement weather, and insufficient funds to expedite the work under way. I might say in passing that probably the most noticeable cause of failure is that a class of incompetent contractors, having absolutely no experience in bituminous construction, bid on highway work and look to the engineering department as a school of instruction for their guidance.

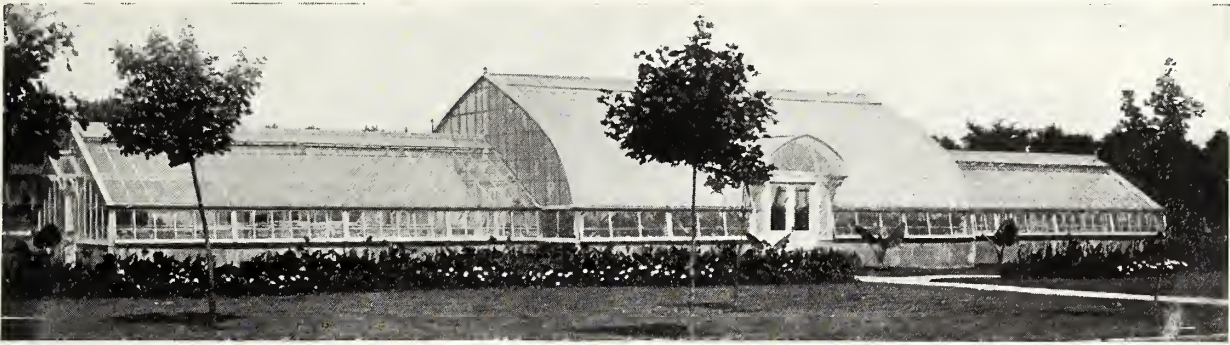
As to what the life of a bituminous penetration pavement will be, time alone can tell, as the body of such a road contains a mass of material that is not evenly, properly or finely graded. Both coarse and fine sections exist, permitting an application of the bituminous binder either in excess or deficiency, and, possibly, in some instances, only a light seal application is secured. While this condition does not exist generally, I must acknowledge that it is there, and I feel that wherever this method of construction has been, or is being followed, it is only a question of time until the weak places show signs of disintegration. These, of course, can be repaired by an efficient maintenance force, and upon this maintenance force the probable length of life of this type of pavement depends. Where this class of pavement is supervised under the most expert management, the results at best are only those of a surface character and produce a road that for the time being seems to give satisfactory results.

Bituminous concrete pavements, constructed by the mixing together of stone, sand and bituminous cement, in mechanical mixers, reduce the chance of failure to the minimum and eliminate many of the causes of failure found in penetration construction.

It is not necessary for me to discuss here the material, its size, quality or character, or to explain in detail how this mixture is secured, as the average engineer is well acquainted with this type of pavement, inasmuch as it is very similar to the mixture used in all the large cities for street purposes. While the best results from this type of pavement are obtained by using a cement concrete foundation, it is not absolutely necessary that such a foundation be used, as experience has demonstrated that water bound macadam roads, where they have been properly drained, can be resurfaced with a mechanical mixture, and the results therefrom compare favorably with those of sheet asphalt streets. This type of construction has been a success and I feel safe in saying that most of the old water bound macadam roads that have been torn by the heavy traffic can readily be brought to grade, properly crowned, made firm, and covered with a bituminous concrete that will be economical and serviceable for many years.

I do not believe very much in the use of telford foundation for a mechanically mixed surface, as it is almost impossible to obtain, upon a telford foundation, a surface that will not be more or less wavy, and we all know that bituminously constructed pavements which have a wavy surface are soon doomed to destruction. In the construction of this type of pavement there are a few points which must be closely watched. The first—and to my mind the most important—is the mixture produced by the majority of mixers at present in use. There is a tendency in all revolving mixers to bring the large stone together, and, unless in the dumping of the mixer this is closely watched, the purpose of mixing—which is that of having the aggregate of different sizes so mixed as to give the lowest percentage of voids—will be defeated. This condition will again arise if the material has to be transported a very great distance from the mixer to the road, as there will be a tendency for the larger stone to work toward the top of the load and the smaller material toward the bottom. So it is important in placing the material in the pavement that it should first be dumped upon a platform and from there shoveled into place in as uniform a mixture as possible.

I have used two distinct types of mixed bituminous construction. In one of these there was used a cut-back bituminous material which remained in a plastic state for several days after being placed on the road, thereby bringing about a continuous bonding process, by means of local traffic passing over the road. The result of this was



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to bring about a perfectly smooth and uniform surface, in which there was probably from 70 to 80 per cent of mineral aggregate exposed, which furnished traction for horses' shoes and automobile tires, thus eliminating one of the great criticisms of this type of pavement. In the other there was used a straight bituminous material of approximately 60 to 70 penetration, upon which a seal coat was used to bring about a smooth and compact surface.

Care should be exercised in determining the sizes of stone for the type of pavement which is to be constructed. From experience, I do not believe it wise to use any stone larger than that which will pass through a one-inch ring in the construction of a pavement upon a cement concrete foundation, inasmuch as, in this type of pavement, while the load is seemingly carried upon the surface, it is in reality carried directly upon the foundation, and, if stone larger than one inch in size is used, there will be a likelihood of the larger stone occurring directly upon one another, thus throwing open the chance of fracture to either or both stones by impact from horses' shoes or weight from the tires of heavily loaded wagons.

Another point that does not favor the larger stone lies in the fact that sooner or later the stone is exposed in the surface in its largest diameter, again placing it in a position to be fractured by traffic. When such fracture occurs, unless the pavement is treated from time to time with light ap-

plications of bituminous cement, it opens the way for moisture to enter the pavement and thus destroy the binding quality of the bituminous material.

Where ordinary care has been taken in the construction of mixed bituminous pavements which have come under my observation, the results obtained fully warrant a continuation of this kind of construction, and I believe that the time is not far distant when the experimental stages of these pavements will be a feature of the past, providing explicit specifications are drawn to plainly designate the quality of all bituminous and other material desired in each individual job, and the old practice of copying specifications and methods in use elsewhere, regardless of local conditions such as drainage, sub-base and traffic, is discontinued; and providing we are successful in properly educating highway engineers, inspectors, contractors, and the forces, both skilled and otherwise, in connection with the use of all materials that enter into the construction of this class of paving. And I consider that in the very near future there will be little distinction between the general specifications that designate the construction of highway pavements and those that designate the construction of city streets, inasmuch as the automobile and automobile truck—which are the most dangerous factors in the destruction of the average pavement—will traverse the city street and the country road in equal numbers.

ness blocks and urged more co-operation between architecture and horticulture, to attain such a result. It is interesting to note in this connection that many of leading Chicago banks and business houses are adorned with window gardens this summer.

Mayor C. H. Kerr, of Independence, Kansas, has been putting forth strenuous efforts to beautify Old Mount Hope Cemetery of that city. The mayor is an interested reader of *PARK & CEMETERY* and of Weed's *Modern Park Cemeteries* and is making good use of these in his laudable undertaking. The cemetery has always been operated on the system of individual care and Mayor Kerr is trying to place it upon a community basis, with each lot owner giving the city authorities full powers over the care of each lot. An extract from a newspaper communication signed by the mayor gives a glimpse at the strange obstacles that have been thrown in his way: "I have mailed hundreds of letters to lot owners wherever I could locate them, telling them of the condition of their lots and asking them to give the city permission to make their lots conform to a general plan and have the lots regularly cleaned. I enclosed a slip for them to sign, giving the city this permission. There was no price asked for this service and the permit expressly stated that the title to the lot was in no way affected by their signing it. It seems that a few have misunderstood this request and look upon it as an attempt on my part to rob them of their property rights. Others have seized upon the proposition as an opportunity to disagree with the city officers. I really enjoy having such people land on me and unload as it seems to do them so much good to 'tell a mayor where to head in' that one would

CEMETERY NOTES

Mrs. J. C. Means, a sister of Arthur J. Graves, superintendent of the Bloomington, Ill., Cemetery and one of the directors of that cemetery, was instantly killed in an automobile accident June 21. The members of the old Illinois Association of Cemetery Superintendents knew her. She was very well and favorably known, was one of the directors of the Civic League, ex-regent of the D. A. R., and treasurer of the Woman's Club.

W. N. Rudd, president Mt. Greenwood Cemetery, Chicago, addressed the Chicago Association of Commerce last month on "Chicago Out of Doors." He said it had been a long time since Chicago had done anything big in the way of park development and made a plea for action now while desirable land could be had at reasonable prices. He strongly urged more small parks and universal bathing facilities for the masses. At the same meeting, J. C. Vaughn, Chicago, president of the National Council of Horticulture, made a plea for civic beauty in the advancement of busi-



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be mean to deprive them of the pleasure. Those who misunderstand and those who will not conform to any rule but their own are placing the city in a position where little can be accomplished toward beautifying Mount Hope."

The new cemetery being laid out and built by the Woodlawn Park Corporation at Charlestown, S. C., is now an actual going proposition. Within the last two months an immense amount of work has been done, walks having been laid out, bushes and undergrowth removed, and a dam built for the winding lake. The plot of 135 acres has several historical features also which will be of interest to Charlestonians. Besides several graves dating from 1836 and later there are ruins of the old home of Wade Hampton's father, consisting of a single pillar broken about twenty feet from the ground, and a pile of brick and masonry. The company is headed by Mr. G. Jeff McDowell and as directors Messrs. H. H. Ficken, Montague Triest, A. C. Connelley, J. Henry Stuhr, T. J. McCarty, T. J. Price, John McCrady, G. J. McDowell and F. G. Ravenel. Its vice president is F. G. Ravenel and the secretary-treasurer, C. Deas Gadsden.



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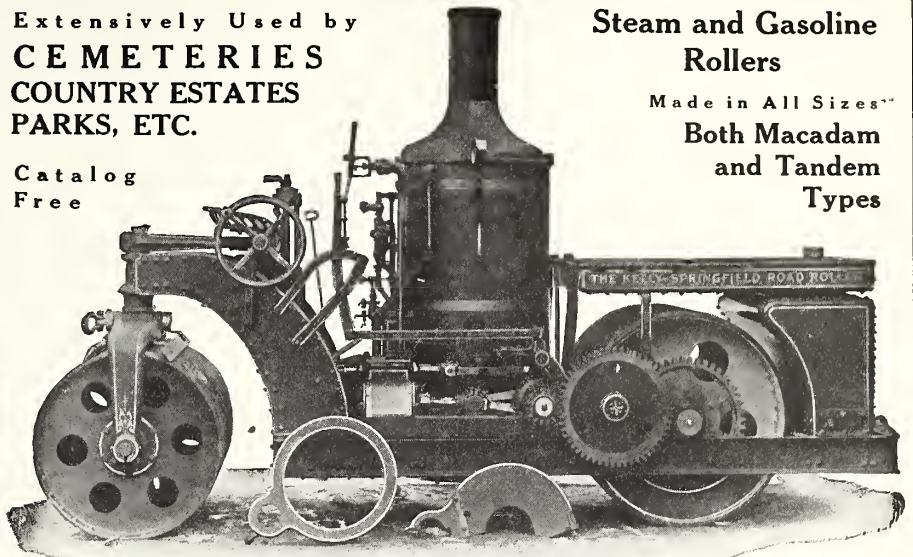
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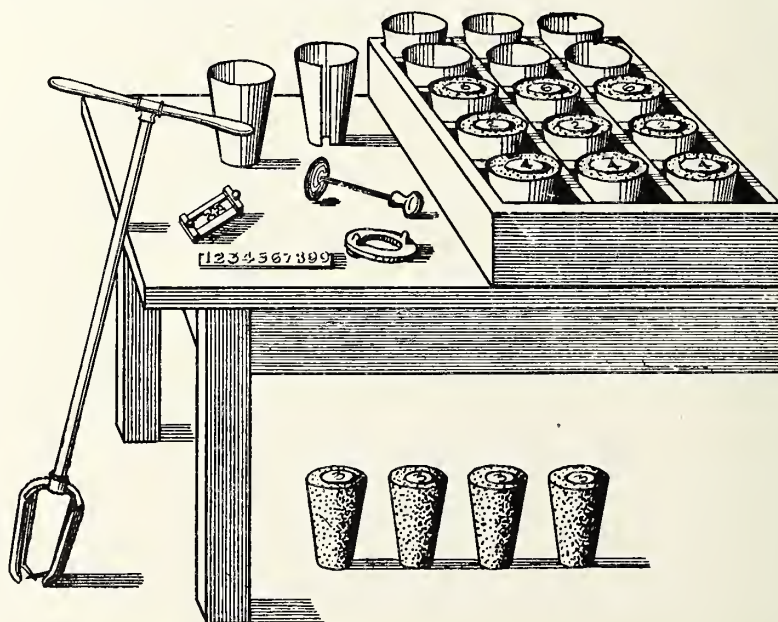
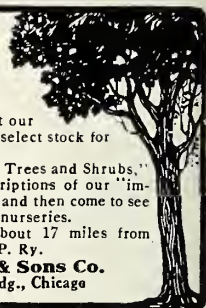
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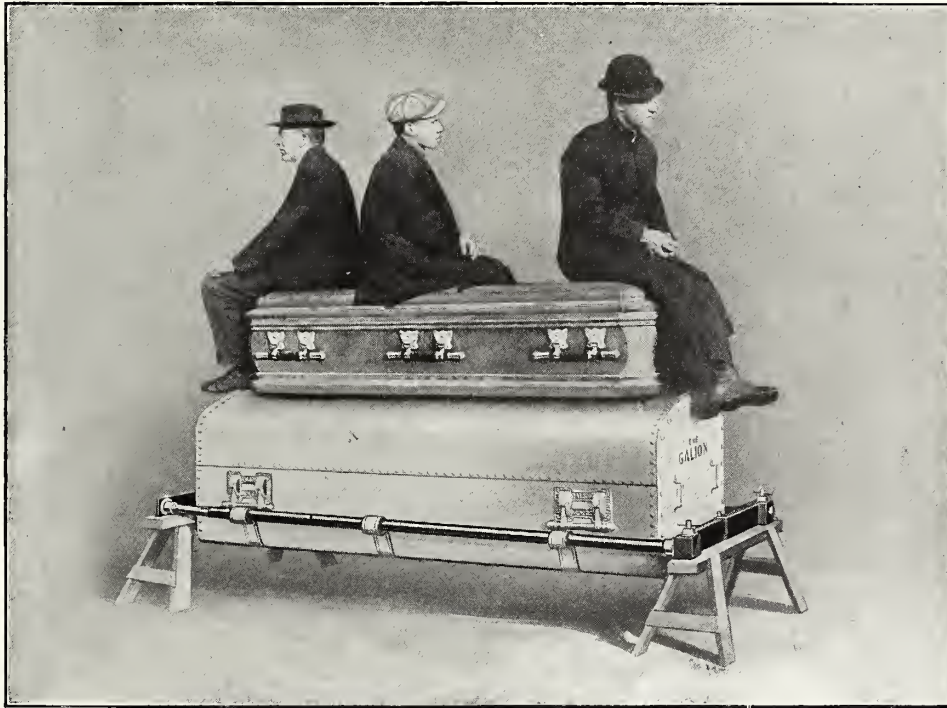
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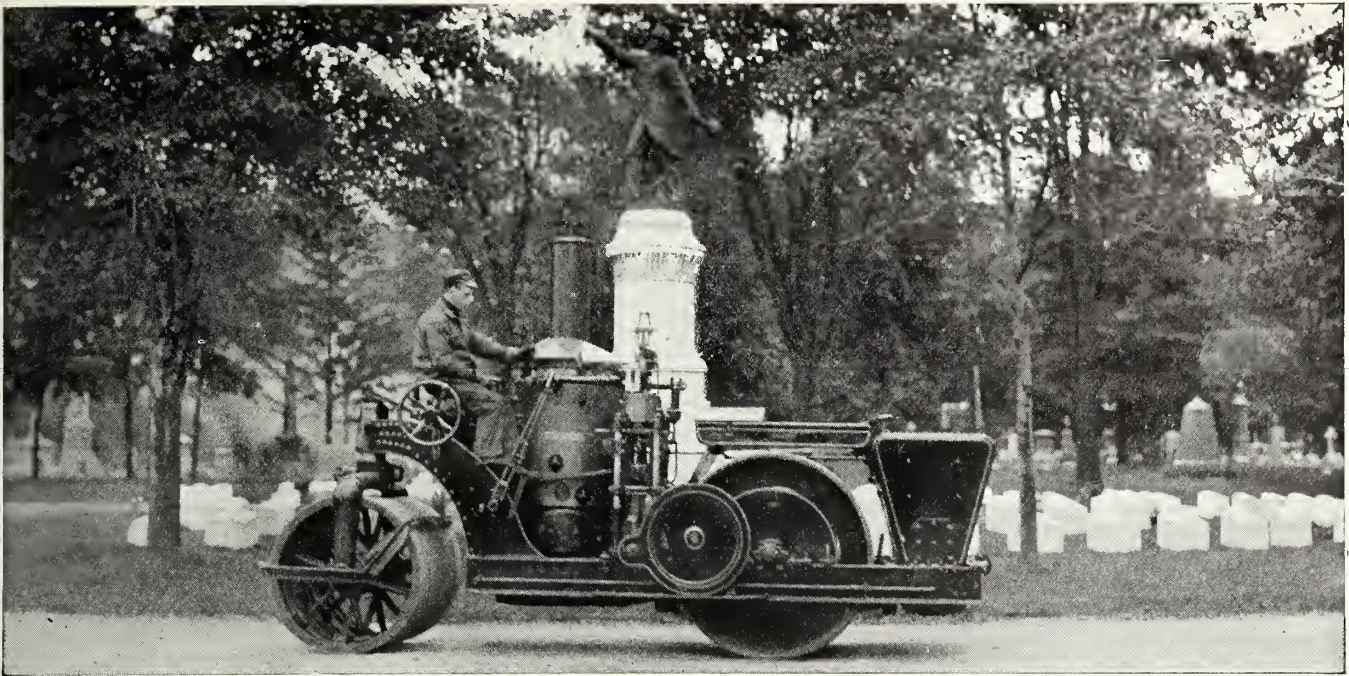
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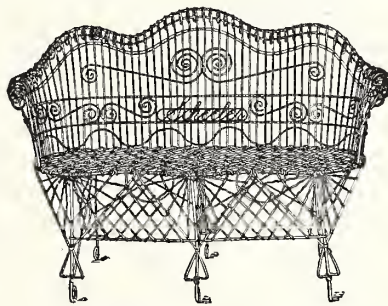
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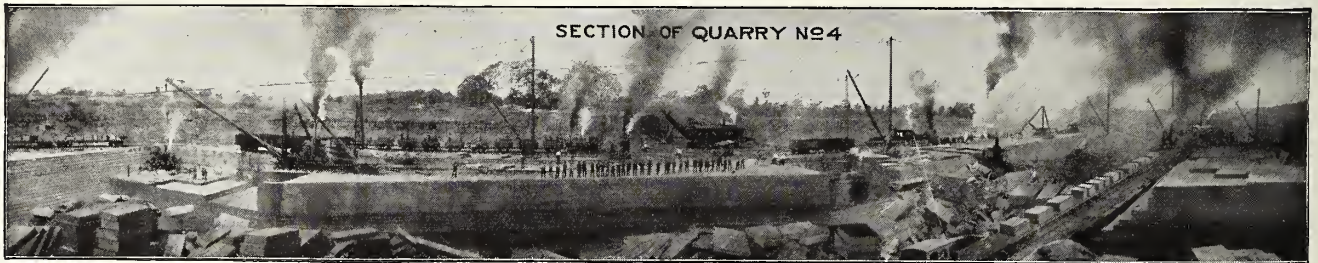
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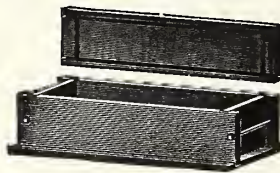
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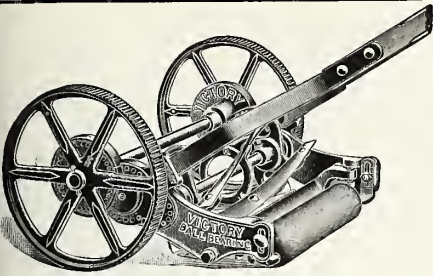


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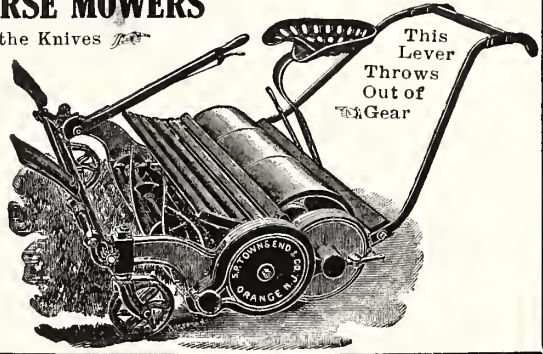
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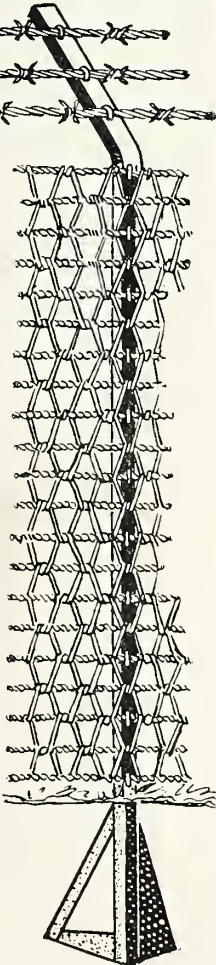
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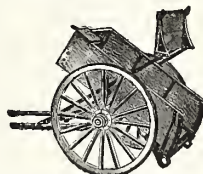
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Visible seal which is absolute. The "National" is the only light weight cement vault that has stood the test of years of experience. Sells at a price within reach of all and gives a handsome profit.

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More National Molds and Vaults in use than all others combined.

Cemetery associations and superintendents—a chance to give the best at a large profit to yourselves.

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All Florida inquiries address to
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Cut of Short and Quick Adjusting Device

Frame of beautiful golden oak. For all sizes and any weight required

National Devices Short and Quick Adjusting Chapel Devices

**Full Telescopic Burial
 Equipments**

Commendable Features of Both Wood and Metal Frame Devices

The operation of lowering the casket is under the absolute control of the operator. Any speed or checking the descent of the casket is at his will.

Telescopes to take infant caskets and up to ordinary steel vaults, and no sections inserted or taken out to obtain size desired. Has no intricate or sensitive machinery, but instead, simple and rigid.

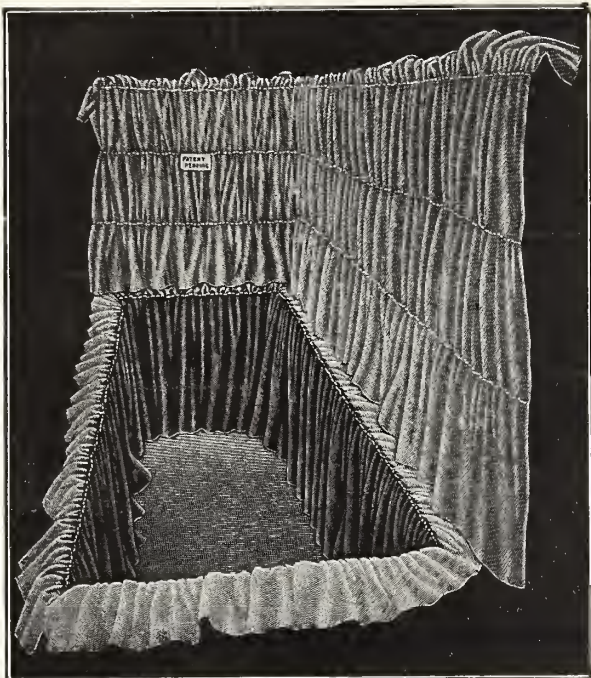
Our Perfection Safety Brake is a simple, yet a positive control, fully controlling the load at the will of the operator who simply gives the lever a slight turn. It is non-corrosive; will not get out of order.

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 also Tents, Grave Linings, Earth Covers, Etc.**

Write for new catalogue showing our entire line of Lowering Devices, Etc.

COLDWATER National Burial Device Co. MICHIGAN



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colors and prices to suit everybody.

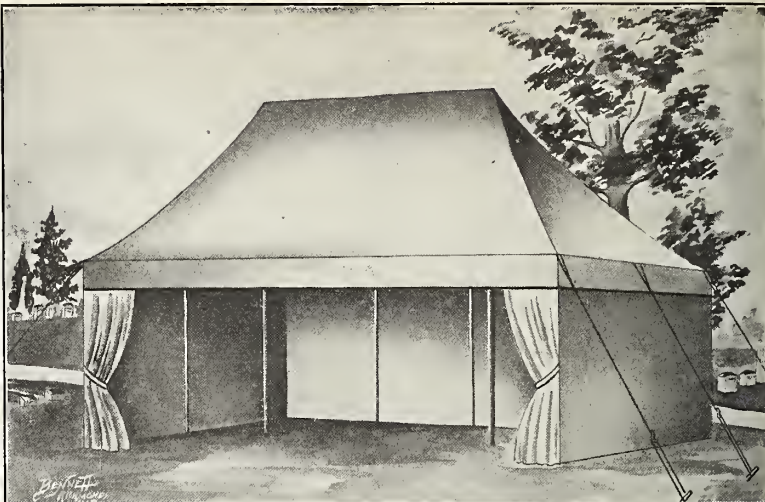
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Our olive green duck dirt covers last four times as long as any oil cloth cover, and always look better.



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WE manufacture and sell direct to cemeteries. Our new combination tarpaulin and tent for protection of your men while digging the grave is just what you want. Write for particulars today. A cemetery is only half equipped without a supply of them.

Lowering Devices, Cemetery Trucks, Casket Racks, and a Full Line of Undertakers Supplies

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This carriage is a very useful and appropriate conveyance in cemeteries having suburban train service, also for conveying a body from hearse to train; has rubber tired wheels, and is finished in dark green with black trimmings.

Is the health
and comfort
of your
citizens
worth
considering

?

Write for detailed
description and prices



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Durfee Grave Dirt Cover

Made in oval form, of green duck, 9 feet by 16 feet.



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will fit any grave, is a handsome design and has been engraved at a large expense. Our circular shows four other patterns.

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Park and Cemetery and Landscape Gardening

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Entered as Second Class Matter June 9, 1900, at the Post Office at Chicago, Illinois, under act of March 3rd, 1879.

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Vol. XXIV., No. 7 SEPTEMBER, 1914

CEMETERY IMPROVEMENT NUMBER

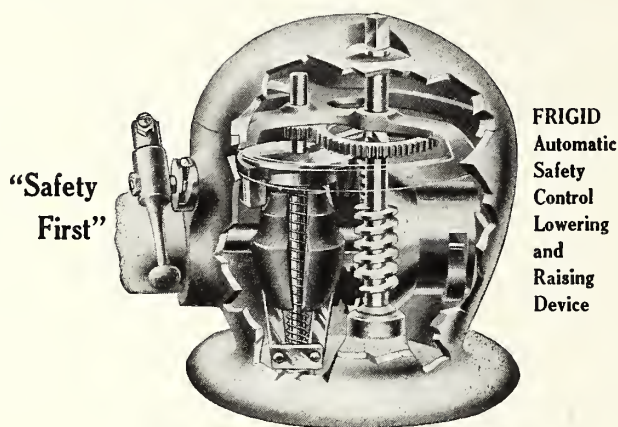
The Monument and Its Surroundings, by James Currie; Harmonizing Monumental Design with Cemetery Lawn—Handling the Cemetery's Patrons—Practical Points in Cemetery Management—Lawn Treatment to Set Off Monuments—Legal Status of the Cemetery—Report of Park Superintendents Convention—Program of A. A. C. S. Convention at St. Louis.



APPROPRIATE DESIGN OF IRON FENCE FOR CEMETERY, PARK OR PLAYGROUND
The Stewart Iron Works Co., Cincinnati, O. See Page 244.

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In the automatic control of the FRIGID Lowering Device lies its perfect safety—in addition to safety we give beauty, uniformity, simplicity, durability, richness in appearance and the ease of operation.



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The LITTLE WONDER Concrete Mixer we bought in 1911 has been doing good work ever since, and has lifted our concrete work from a drag to a satisfaction. After being idle during the rough winter the machine started off good as new.

A. L. SMITH,
Treasurer West Laurel Hill Cemetery Co.,
Philadelphia, Pa.

I find the LITTLE WONDER Concrete Mixer all you claim for it. It is especially suited to our kind of construction.

JERSEYVILLE MAUSOLEUM CO.,
Jerseyville, Ill.

The LITTLE WONDER is just the machine for foundation work, both as to capacity, ease of operation and facility for moving about. It is better than you represented it to be and I shall be glad to recommend it.

JAMES Y. CRAIG,
Supt. Forest Lawn Cemetery,
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The LITTLE WONDER Concrete Mixer works elegantly.

J. T. YATES,
Supt. and Treas. Spring Hill Cemetery,
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We are more than pleased, and after using several different mixers can freely say the LITTLE WONDER has them all beaten.

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Little Wonder "Five" Concrete Mixers

make these improvements possible at low cost. You can save 50 cents per cubic yard over hand work and do it better. They insure perfect mixing and uniformity of strength and appearance. With them you can build concrete pavilions, peristyles, bridges, foundations for monuments, mausoleums, drives, walks, curbs, etc. With a set of molds you can make lot-markers, posts, burial vaults, etc. The LITTLE WONDER "FIVE" pays for itself several times over in one season and is making money besides in many cemeteries.

When the machine is used **without** Side Loader the drum is charged on one side, tilted and discharged on the other into barrows or direct into forms. When the Side Loader is used one batch is mixed while the following batch is being loaded. The drum has a very wide mouth. The consistency of the mix is easily regulated. The drum will not clog, and after use is easily cleaned.

Capacity, **without** Side Loader, 35 to 50 cubic yards per day. Side Loader doubles this output. Strong construction and built to last, yet easily portable. Wide tired steel wheels, standard tread. First class gasoline engine runs the mixer for about 35 cents per day.

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BY "right" we mean right for the kind of enduring, carefully made fence it pays to expend money for.

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repairs and its short life. There's as much difference in the endurance of various iron fences as there is in woods. High grade and high grade workmanship only goes into our fences.

ENTERPRISE IRON WORKS

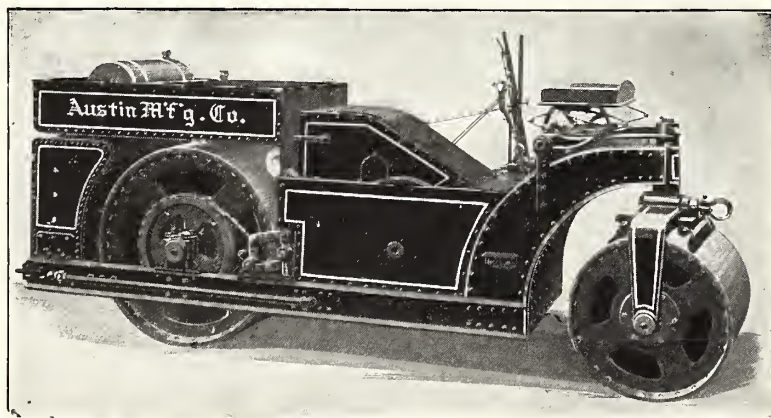
The reason we can build such good fence, so reasonable, is because we have reduced manufacturing processes down to so fine a point that we can cut such cost corners right down to the bone.

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PARK AND CEMETERY AND LANDSCAPE GARDENING

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SEPTEMBER, 1914

EDITORIAL

VOL. XXIV No. 7

Co-operation For Better Cemetery Art

The address of Mr. Currie before the Monument Dealers' Association, and the account of the work of Lake View Cemetery in Cleveland, printed elsewhere in this issue, offer valuable suggestions to every thoughtful cemetery man on one of the most important tasks of the modern cemetery, namely, the harmonizing of the monuments with the landscape. Progress in this direction involves the designing of more artistic monuments and their placement in appropriate landscape surroundings. This work demands the enlightened co-operation of the best men in the monument craft and in the art of cemetery development, and the matter printed in this issue is evidence of substantial progress. The National Retail Monument Dealers' Association convention, before which Mr. Currie spoke, marked in many ways advancing standards in the monument craft. In addition to showing the highest quality exhibit in the history of the association, there was presented in the chief addresses and in the monumental work exhibit a striking tendency toward better workmanship, more artistic design and less duplication of stock forms. The exhibit showed an increasing number of examples of the application of good proportions, tasteful decoration and artistic lines to small cemetery

monuments, and the dealers who visit these annual expositions are coming more and more to realize that they can sell the better designed monuments, for better prices, if they will talk artistic, original design instead of square feet, size and height. There has been real development along this line during the past few years, and if those who have charge of the cemeteries will co-operate with those who are striving to create more artistic monuments, the possibilities for the future are unlimited. The cemetery authorities can help toward higher ideals by encouraging the general public to see the difference between a beautifully proportioned, well executed memorial and a pile of stone bought at the smallest price. The right tree in the wrong place can be moved in the fall and the wrong bush in the right place can be substituted by something else, but the monument must stand as it is and where it is forever. Therefore, if the best results are to be obtained, the design of the monument must be given the attention it deserves. The monument dealer and the cemetery should work together more efficiently than ever before in a united effort to reach the goal toward which we are all striving—the perfection of cemetery art.

Editorial Notes

The Massachusetts Forestry Association has announced a unique "Town Forest" contest under the provision of which the association will plant to white pine half of a hundred-acre tract that may be set aside by a town that meets the requirements of this contest. An interesting pamphlet describing the contest in detail comes from the secretary of the association, Harris A. Reynolds, 4 Joy street, Boston, Mass.

Henry B. F. McFarland, former Commissioner of the District of Columbia, has written for the Washington *Herald* a series of seven articles on the building of Washington and the establishment of a permanent system of government that have been reprinted in pamphlet form under the title, "The Nation's Relations With Its Capital City." The pamphlet is being distributed by the American Civic Association to further legislative plans for the beautification of Washington.

The Park Commissioners of Rochester, N. Y., are asked to give up control of baseball, golf, tennis, athletics and playgrounds in the parks to the new Playground Recreation Commission. When they were served with a request from the commission to transfer to it the control of all athletic and recreational activities in the parks there was strong objection by some of the commissioners, and the jurisdiction of the Park Board and the new commission is to be officially determined.

For the first time in the history of Dallas, Tex., the Park Board and the School Board will combine in the purchase of property for play park purposes. The Park Board has agreed to pay for half of a tract of land adjoining the Colonial Hill school, and the School Board will pay an equal share toward its purchase. The lot in question in the Colonial Hill school block is 225x407 feet and will cost \$28,000. The two branches of the municipal government will pay \$14,000 each. The land adjoining the school campus will be made into a play park for the children at the expense of the Park Board.

Holding that Emancipation Park, Houston, Tex., is a charity and that a deed thereto creating a perpetuity is not in violation of

the law, Judge Norman G. Kittrell, of Houston, recently handed down a decision in favor of the colored people of Houston in the case of the state against the trustees of the park. The property, ten acres, originally belonged to the Wellborn family, but was sold in 1872 to the colored people of Houston for a park, the consideration being \$800. About six years ago the state brought suit against the trustees of the estate to escheat the property. The contention was that the deed created a perpetuity, which is in violation of the law of the state, except where the grantee is a charity, and the judge's decision above mentioned fixes the bequest as a charity.

To the citizens of Newburgh, N. Y., the most pleasing feature of the visit of the American Association of Park Superintendents was the tribute paid to the memory of Andrew Jackson Downing. It is a trite saying that a prophet is without honor in his own land. But this was not true of Downing. The genius of that great man was recognized in the village of his birth, and the shock occasioned by his untimely death while trying to rescue passengers of the ill-fated Henry Clay left an indelible impression on the people of that time. It is still talked of by old residents. The possession of the city in which it can take justifiable pride is the municipal park named after him. It is one of the most beautiful pleasure grounds in the United States, and its management has never been tainted by the suggestion of graft.

Park Commissioner Ward of Manhattan and Richmond, New York City, wants \$35,000 for additional benches in the parks of these two boroughs. There are 9,856 benches in Manhattan's breathing spots and Mr. Ward is asking for 15,000 more. The department has noted that the demand for benches this year is considerably above the normal excess. The department, moreover, has a fairly incontrovertible case when it shows that no benches have been provided for the parks of Manhattan since 1906. In the meantime, this borough has grown from approximately 2,183,210 to 2,538,616—an increase of 350,000 possible sitters for whom there has been supplied not one additional seat.



MODEL SHOWING A SERIES OF LOTS IN SECTION 23, LAKE VIEW WITH THE STYLE OF MONUMENT AND PLANTING EFFECT PLANNED FOR EACH.

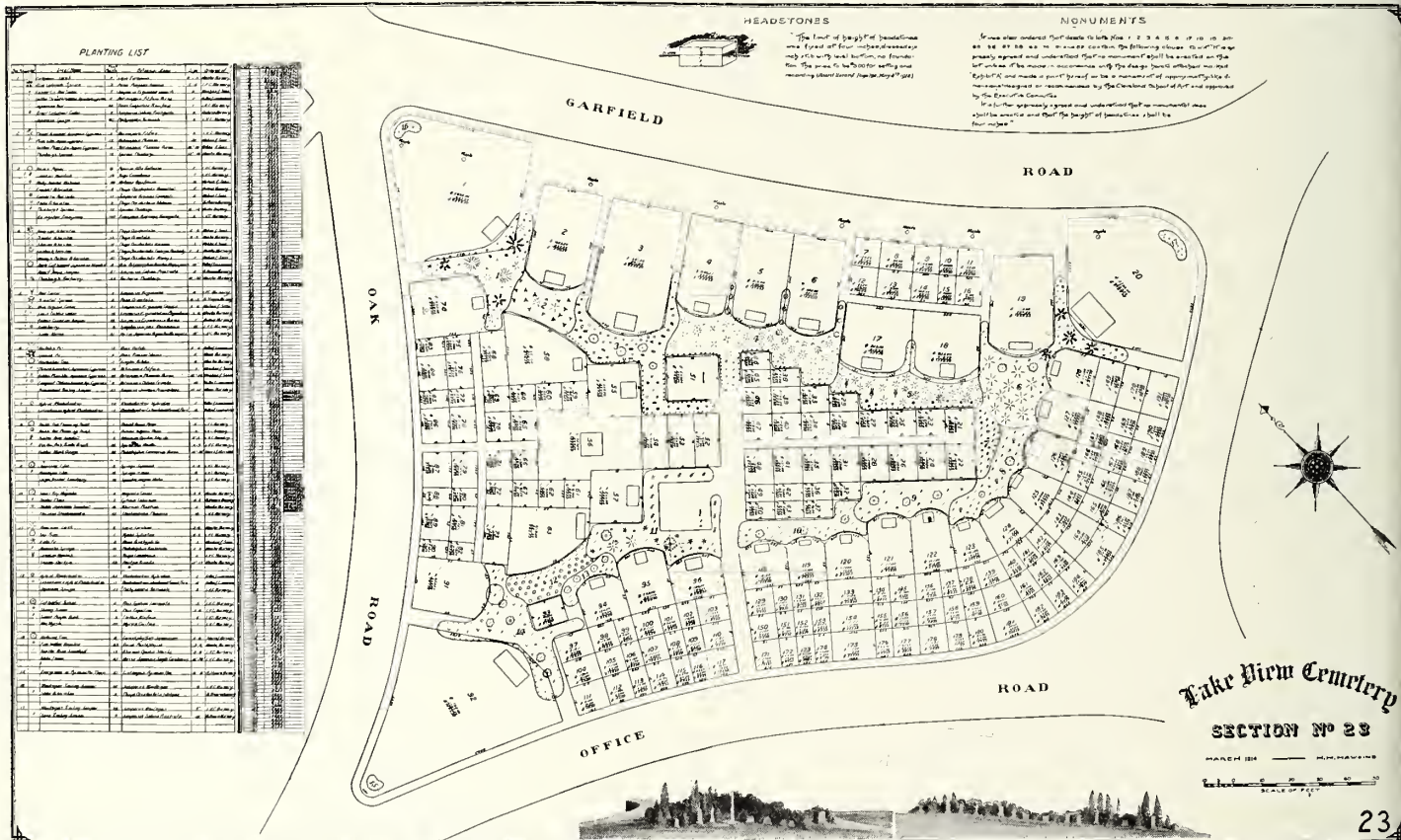
HARMONIZING MONUMENTS and CEMETERY LAWN

Probably the greatest problem in the development of a beautiful modern cemetery is to secure the greatest harmony between the monuments and their landscape setting

the particular spot it occupies, after a careful study of the lot and its surroundings.

Probably the farthest step that has been taken toward this end was recently inaugu-

purchaser with a photograph of a rough model of the monument suggested and a plan of the lot. The planting of this section and of each lot has been definitely de-



PLAN OF SECTION 23, LAKE VIEW CEMETERY, CLEVELAND, OHIO. Showing arrangement of lots, area, and prices, planting list for each lot, and models suggesting styles of monuments.

The maximum development of cemetery beauty is possible only when the design of the monument is suited to its particular location, and where the adjacent landscape and planting is in harmony with the lines, the color and the construction of the monuments. The ideal of the future that is cherished by progressive cemetery managers and monumental craftsmen alike is that every monument shall be designed for

rated by Lake View Cemetery in Cleveland, O., in opening for development Section 23, one of the choicest lawn sections of that beautiful, highly developed and efficiently managed cemetery. The cemetery management, in consultation with experts in art and landscape architecture, has arranged to suggest in the case of certain lots in this section the general style and type of monument to be erected, and furnish the lot

terminated to harmonize with the kind of monument suggested. The lots sold under this arrangement are those situated on the borders of the section, or at certain prominent locations where the selection of an inappropriate type of monument would seriously mar the general effect of the section.

A descriptive booklet, with the rules governing this section and a map of the sec-



MODEL SHOWING STYLE OF MONUMENTS REQUIRED FOR CERTAIN LOTS IN LAKE VIEW CEMETERY.

tion, 18x28 inches in size, were sent to each monument firm in Cleveland, and in addition to these each lot purchaser was given a plan of his lot and a photograph of a model suggesting the style of monument suited to his lot.

The map gives the number, price and area of every lot, pictures of the models for the lots where monumental styles are specified, a complete keyed list of the trees and shrubs to be planted on each lot and

be made in accordance with the design hereto attached, marked "Exhibit A" and made a part hereof, or be a monument approximately like dimensions designed or recommended by the Cleveland School of Art and approved by the Executive Committee. It is further expressly agreed and understood that no monumental vase shall be erected and that the height of headstones shall be four inches."

One of the maps is reproduced herewith

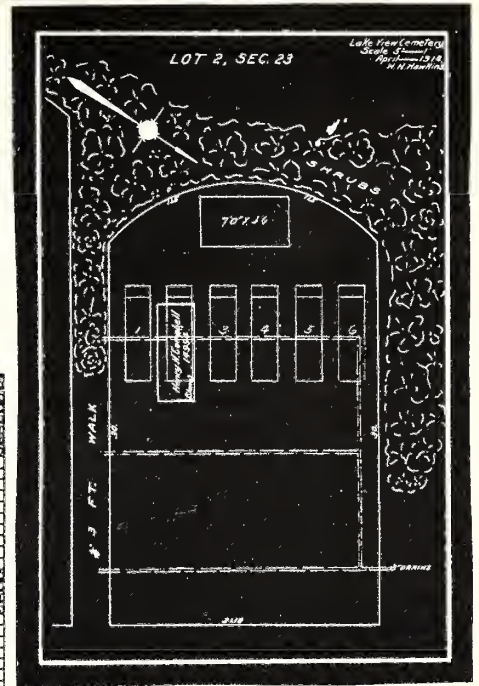
PLANTING LIST

Detail of part of planting list on plan of section 23, Lake View.

the following quotation from the rules governing headstones and monuments:

"Headstones: The limit of height of headstones was fixed at four inches, dressed six-inch stub with level bottom; no foundation. The price to be \$3.00 for setting and recording. (Board Record, page 794, May 4, 1914.)

"Monuments: It was also ordered that deeds to lots Nos. 1, 2, 3, 4, 5, 6, 17, 18, 19, 20, 55, 56, 57, 58, 63, 74, 91 and 92 contain the following clause, to-wit: 'It is expressly agreed and understood that no monument shall be erected on this lot unless it



PLAN OF LOT IN SECTION 23 FURNISHED EACH LOT HOLDER.

being, that on all lots upon which a monument may be erected, the design and location must be approved by our Executive Committee.

This section has been in the market only a few weeks, but so far the sales seem to indicate that the public is not averse to receiving suggestions as to designs for monuments. However, it is too early to draw any definite conclusions as to what may ultimately be the attitude of the public.

It requires a great deal of time and patience to model a section in this way, but we are in hopes that, notwithstanding any change that may take place in the personnel of the management of the cemetery, the original design will be preserved and carried out.

The illustrations are from photographs of plastiline models made here on the grounds, during the winter season and on rainy days by some of our versatile gardeners.

We of course, do not attempt to sell the monument as you will note from the copy of a circular letter to our local granite dealers reading as follows:

"Gentlemen: We are mailing to you today under separate cover a booklet and map of our section 23 which is now on sale. We particularly wish to call your attention to the provision regulating headstones as noted on the map. On the lots



PHOTO OF MODEL FOR STYLE OF MONUMENT AND MARKER GIVEN TO LOT HOLDER.

DETAIL OF PART OF PLANTING LIST ON PLAN OF SECTION 23, LAKE VIEW.

the following quotation from the rules governing headstones and monuments:

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and detailed reproductions are also given of the models for the monuments and of the planting list.

Frederick Green, secretary-treasurer and manager of the Lake View Cemetery, writes as follows of this new plan of cemetery development:

The object, of course, is to control the dimensions, rather than the design of the monument, keeping it in harmony with its shrubbery setting and yet, not thwarting the inclinations of the lot owner, nor injuring the business of the granite dealer.

Except on the eighteen of the thirty-two monument lots on this section, indicated on the map as restricted, we do not, in the whole cemetery, suggest designs for monuments; the general rule

where the monuments are especially restricted, a drawing and photograph of the model will be given to the purchaser when the lot is sold.

Yours very truly,
LAKE VIEW CEMETERY ASS'N."

This choice section of Lake View is located midway between the Euclid avenue entrance to the grounds and the tomb of President Garfield, and is the result of all that money and the thought of men who have spent years in study of the subject can do to beautify it.

A complete system of drains insures against the possibility of wet graves, while an ample endowment fund provides for the care of the grass, shrubs and trees, and the cleaning of the headstones and monuments.

Ownership of a lot constitutes membership in the Lake View Cemetery Association, which is an organization like a church or a club, and, as it is not in any sense a corporation organized to make money and pay dividends, the rules are made solely for the protection and benefit of the lot owners.

Granite or marble stones bearing the lot number mark the corners of each lot, thus enabling the lot owner to at any time readily ascertain the exact boundaries of his lot.

Receptacles for holding cut flowers will be furnished by the association without charge, and water hydrants will be found located on the section at close intervals.

The regulations in the booklet describing Section 23 that pertain to monuments and headstones are as follows:

It is thought that headstones do not add to the general beauty of the landscape, but on the contrary rather mar it. It is said that as their only object is to mark the location of the grave upon the lot, they should not rise above the surface of the lawn, and in some cemeteries such is the imperative rule.

On this section the height is limited to four inches and the design must be approved by the executive committee of the association before the stone is ordered. Headstones are fixed in place by the association.

The location of a monument has so much to do with its looks as well as with the general appearance of its surroundings that on some of the lots in this section the trustees have limited the monument that may be erected, to certain designs which have been passed upon by them as fitting the location and the planting.

As the most desirable residence districts of the city are to be found where the building restrictions are most intense, so too, it is thought that this limitation written in the deeds:

"It is expressly agreed and understood that no monument shall be erected on this lot unless it be made in accordance with the design hereto attached, marked 'Exhibit A' and made a part hereof, or be a monument of like dimensions, designed or recommended by the Cleveland School of Art, and approved by the Executive Committee." will insure the purchaser that the general appearance of the section will remain intact, and will eliminate at once many of the continually recur-



ring questions that confront the trustees as to duplication of design, size, etc.

The lots to which the limitation applies are Nos. 1, 2, 3, 4, 5, 6, 17, 18, 19, 20, 53, 56, 57, 58, 63, 74, 91 and 92.

The foundations for all structures are built exclusively by the association, and the association reserves the right to have monuments fixed in place by its employees should it hereafter be deemed advisable to do so.

REMODELING A NEGLECTED CEMETERY

The Union Cemetery in Watertown, Ont., covers about three acres of land and was in a very neglected condition. The fences surrounding it had fallen over in many parts—some were entirely gone—weeds and unkept shrubs had taken possession of the ground. Many headstones had fallen over and were broken, while many others, being loose on their bases, were leaning, while only here and there a well cared for plot was to be seen.

The plan adopted by this committee was to meet the Cemetery Board and obtain its consent, which was readily granted. A circular letter was drafted and 500 copies were printed. In the meantime each member of the committee was securing addresses of those having friends lying in the cemetery and which were found to reach from Kingston to Vancouver and from the southern states to Edmonton. Upon the arrival of our circular letters from the printer they

were mailed at once, while in our village and adjoining country a personal canvass was made until the sum of \$540 was raised.

The committee interviewed F. H. Ruth-erford, superintendent of the Hamilton Cemetery, regarding methods of work, and his knowledge of the work and willingness to advise was a great help, and the interest he manifested in our work by allowing our committee to have his assistant foreman for two days to work with and instruct our

foreman and five other workmen we had employed spelled success at the outset. They proceeded to uproot all weeds, wild shrubbery, rake off old grass, then burn the sod, cut the sods from the old mounds, level the graves and resod, being careful to replace every marker and place one, wherever there was none. This work took about three weeks, and after this the old fences were straightened up, thirty rods of new wire fence with posts was built, one hundred yards of tile drain laid, fifty-nine headstones cemented into their bases, and those that were broken laid flat upon the graves they were intended to mark. Thirty-five shade trees were planted out, as well as twenty-five flowering shrubs, donated by E. D. Smith, of Winona. The fence and

gates at the entrance were painted white, thirty new cedar tie posts were set, while the old ones were straightened up, all being capped with galvanized tin and painted dark green.

The iron railings around a dozen family plots were painted black. A large bed, fifteen feet in diameter, was filled with scarlet geraniums, just inside the entrance gates; a lawn mower was bought and also sod cutter, rakes and padlock for tool house. A square canvas 16x16 feet, made of sail cloth, was purchased, to be laid on the sod, so that when a fresh grave is opened the adjoining plots will not be spoiled. This fall they have planted about 500 bulbs for spring flowering—tulips, daffodils and jonquils—and next spring expect

to plant out peonies, iris and roses. A caretaker was hired by the day to care for the whole cemetery, as well as the street which forms the entrance. The work has been a grand success.

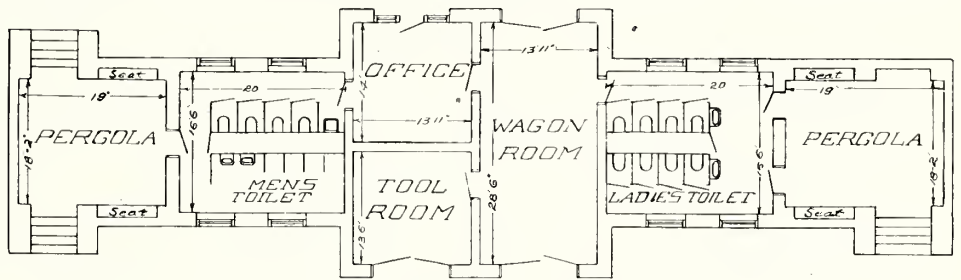
The committee referred to above was selected from the Woman's Institute, and in writing recently the president of this institute, Mrs. W. A. Ryckman, says: "A well has just been completed at a cost of about \$75 which provides abundance of water, so that many have planted flowers in their lots, thus helping to make the cemetery more attractive. We expect to set out more shrubs and perennials next spring and each year add some feature to improve the present condition."

COMBINED COMFORT STATION AND TOOL HOUSE

A very substantially built and conveniently arranged comfort station and tool house that is well adapted for purpose and at the same time a not unattractive feature of the landscape is illustrated here in the new building that was recently erected in Sinissippi Park, Rockford, Ill.

The floor plan shown here is self-explanatory and suggestive of arrangements that could be readily adapted to either park or cemetery use.

The upstairs of the building, above wagon shed, tool room and office, is used for storeroom, while the comfort houses are one story high. There is no basement to the building. The floor in the comfort houses is made of terrazzo, a composition of



PLAN FOR COMFORT AND TOOL HOUSE IN ROCKFORD, ILL., PARK.

cement, top dressed and polished with marble chips. The floors in office, tool room and wagon shed are cement. Superintendent Paul B. Riis of the Rockford Parks

has found the arrangement of this combined comfort and tool house a great convenience to the public and it has met every demand made upon it.



COMFORT AND TOOL HOUSE, SINISSIPPI PARK, ROCKFORD, ILL.

OFFICIAL COMMUNICATIONS

G. X. AMRHYN, New Haven, Conn., President



AND CONTRIBUTIONS

ROLAND W. COTTERILL, Seattle, Wash., Sec.

PARK MEN HAVE GOOD NEW YORK CONVENTION

The sixteenth annual meeting of the American Association of Park Superintendents was held at Newburgh, N. Y., and New York City August 24, 25, 26 and 27. The headquarters at Newburgh were at the Palatine Hotel, in New York at the Hotel Astor. The attendance of both members and guests was exceptionally large, but there was ample room and entertainment for all. The meeting was one of the best and busiest in the history of the organization.

The opening session at Newburgh was held in the gymnasium of the Young Men's Christian Association. The meeting was called to order by the president, H. S. Richards, and considerable preliminary business was disposed of. The following list of applicants for membership were reported by the committee and unanimously elected:

Arthur P. Perley, South Bend, Ind.; Warren H. Manning, Harrisburg, Pa.; R. H. Huntington, Council Bluffs, Ia.; James B. Shea, Madison, N. J.; John B. Corwin, Newburgh; Henry K. Eckert, Niagara, N. Y.; James O. Howard, Castile, N. Y.; E. S. Letts, Denver, Colo.; Arthur A. Beischjald, Chisholm, Minn.; David Campbell, Syracuse, N. Y.; Nelson Crist, Atlanta, Ga.; Edwin A. Philbrick, Detroit, Mich.; Robert L. Parker, Hartford, Conn.; Frank

Hamilton, New York; George W. Hess, Washington, D. C.

W. S. Manning, of Baltimore, chairman of the committee, reported on proposed changes in the constitution. After a short discussion the amendments were unanimously adopted. The secretary, J. J. Levison, of Brooklyn, made his annual report, showing the society to be in a satisfactory financial condition with a small increase in membership. William J. Zartmann, Theo. Wirth and Emil T. Mische were appointed a nominating committee.

The president, H. S. Richards, called upon George Champion to take the chair, and he introduced Mayor John B. Corwin, of Newburgh, who said in part:

It is but natural that the foremost thought of Newburgh in your minds is as the home of Downing, for it was here that he was born, here that he made his home, and upon the river flowing at our feet that he met his tragic and untimely death.

"Of Downing I shall speak to you but little for you are acquainted with his life, his work, his professional reputation and his influence far better than I. I only know that he was a dreamer with an artist's soul, who disdaining the limitations of the written word, the painted canvas and the chiseled stone chose to transcribe his dreams upon the living face of nature and through the medium of growing leaf and sward, of winding path and massive rock, of rippling stream and placid pool, so interpreted the beauty of his visions that all who saw might feel and read and know.

The welcome of the Mayor was supplemented by Park Commissioner William Cook Belknap, who said in part:

As to park development possibilities, nature has done her best for Newburgh and we must all regret we have not as a community taken greater advantage of what she offers. The City of Newburgh with two miles of waterfront and one of the finest rivers in the world has not a single foot that has been made available for park purposes. This should not be.

As to scenic park we have not been so remiss. In Downing Park we feel we have something in which we all may take pride and submit for your inspection. Let us be thankful for this. The development of Downing Park has been full of sentiment as a letter written by Calvert Vaux under date of June 27, 1889, will show. This letter reads:

"In a letter written by us some time ago we offered to give our professional aid as landscape architects to the committee without charge if the city should name the reservation Downing Park and we now with pleasure renew this offer in more specific form as suggested with the hope that it may be accepted in the spirit in which it has been conceived, that of profound respect for the memory of Downing. Yours faithfully, Calvert Vaux, for F. L. & J. C. Olmsted."

These names mean something to you all. With the spirit of Downing about and guided by Frederick Law Olmsted and Calvert Vaux it would have been hard to go astray. That the spirit of these men may remain with us and with you is the best wish I can offer to members of your association. Having enjoyed your hospitality in Boston and knowing from the reports of Superintendent Haible of the generous treatment he has received at your yearly gatherings I can only hope we may be able to make your stay with us interesting and instructive.

H. S. Richards, president of the association, responded to the addresses of welcome in a fitting manner.

Professor Frank A. Waugh delivered an interesting and scholarly memorial address on Andrew Jackson Downing, known in



PARK SUPERINTENDENTS IN CONVENTION AT NEWBURGH, N. Y.

Newburgh as the "Father of Downing Park." This address will be printed in full in an early issue of *PARK AND CEMETERY*.

Ogelsby Paul, landscape gardener in charge of Fairmount Park, Philadelphia, Pa., was to have delivered an illustrated lecture on "The Preservation of Natural Woodlands Under Park Conditions." Owing to illness, however, Mr. Paul was unable to attend. Instead, he sent his manuscript and forty-nine slides. The paper was read by Herman Merkel, curator of the Bronx Park Zoological Gardens in New York. The pictures showed various conditions in Fairmount Park. The paper will be printed in full in a later issue.

The secretary, J. J. Levison, of Brooklyn, then gave an illustrated address on the elements required for successful tree culture. He divided the subject into five parts—first, vegetable humus and the important part it plays in tree growth; second, the advantages of close planting as it is done in Europe; third, proper treatment of undergrowth; fourth, permanent trees; fifth, insects and diseases which have to be combated.

Yielding to an insistent demand from the other delegates, President Richards presented an able paper on "Some Present Day Park Problems," which is printed elsewhere in this department.

Tuesday, August 25, an early start was made for Mt. Beacon by way of ferry across the Hudson River and inclined railway to the top of the mountain. The grade was very steep and the visitors were relieved when they arrived at the top and looked out upon the matchless panorama of rivers and mountains, cultivated fields, orchards and the cities of Newburgh, Matewan and Fishkill. The mountain is famous as the location of the beacon fires to alarm the residents during the Revolutionary war. The return was made without incident.

At 10 a. m. the members and guests took the automobiles in waiting and started upon a wonderful and long to be remembered day of sightseeing. The first place visited, and perhaps the place of greatest interest, was the former home of Andrew J. Downing. Once a beautiful building, it had for its grounds the whole city block on which it is located. Since his time the place has been cut up in city lots and has been very much neglected. Both Downings were born in the small house to the north of this house. The former home of Charles J. Downing was built in the '50s, designed by Andrew J. Downing, who also lived there about five years with his brother.

The next place visited was the home of T. R. Beal. The Italian garden on this place was greatly admired. The home of Mrs. A. Delano Hitch attracted much attention because both house and grounds were designed by A. J. Downing. Next

came the home of James A. Ramsdell. The gardens, artificial brook and rock work to the south of the house were carefully inspected. The flood effects were especially fine. Considerable time was spent in the old Dutch farmhouse which was occupied by George Washington and his family during the Revolutionary war. Downing Park was inspected and greatly admired. It is a remarkable development, considering the comparative short time it has been in the making. General Knox's headquarters, erected in 1754, were pointed out.

After inspecting places of local interest the thirty cars sped away southward for their thirty-mile run to Mrs. Harriman's estate and Tuxedo Park. Owing to the absence of Mrs. Harriman luncheon was served at the clubhouse in the park and the climb to Mrs. Harriman's house on the hilltop was made later in the afternoon. After inspecting the grounds of this wonderful estate and enjoying the unequalled views on every side the party returned to the hotel. The speedometer registered nearly 100 miles, every foot of which was full of instruction and entertainment for those interested in park work.

In the evening a reception was given the members of the association, their guests and friends at the factory of the Coldwell Lawn Mower Co., and several enjoyable hours were spent in dancing and card playing, supplemented by ample refreshments.

On Wednesday, August 26, the whole day was given over to a trip down the Hudson River as the guests of the Hon. George W. Perkins, president of the Interstate Park Commission. The first stop was made at West Point, where an hour was spent visiting the grounds and museum of the U. S. Military Academy. The next stop was at Bear Mountain, in the Interstate Park, where a brief address was made by Mr. Perkins and a luncheon served precisely as it is served to visitors for 35 cents. It was an excellent meal for the price and was an object lesson for park superintendents who have restaurants on their grounds.

The address by the Hon. George W. Perkins at the Bear Mountain Park was listened to with very great interest. He said that the Interstate Park Commissions virtually controlled the west bank of the Hudson River—with the exception of a few towns—from opposite New York City to Newburgh, a distance of about sixty miles—the width of the commissioners' holdings varied from a few hundred feet to sixteen miles. At the base of the Palisades there was a strip of land along the river front for twelve miles, including more land than the total area of Central Park. In the immediate vicinity of Bear Mountain the commissions held about 20,000 acres. The commissions consisted of five from New Jersey and five from New York and they served without compensation.

Mrs. Harriman had contributed 10,000 acres of land and \$1,000,000. Other public-spirited citizens had increased this to \$2,500,000, the total fund on hand now being about \$4,000,000 in bank.

The object of the park was for people who dwell in the city to get into the country and get in close touch with nature.

At the conclusion of Mr. Perkins' address Mr. Shea, of Boston, said he was astonished at the importance and magnitude of the work and was glad it was in such good hands and thanked Mr. Perkins for his hospitality.

As soon as the steamer started on the trip down the river the business meeting adjourned from Monday evening was called to order by President H. S. Richards. The first business was the election of three new members—Messrs. Arthur W. Connell, State College, Pennsylvania; John W. Kernan, Lowell, Mass., and — Eckert, superintendent of Niagara Falls Reservation. John Dunbar, of Rochester, N. Y., was elected an honorary member.

William J. Zartmann moved that *PARK AND CEMETERY* be sent only to those who had paid their dues for the current year. After some discussion it was so voted.

The annual election was then held, resulting in the choice of Gustave X. Amrhyn, New Haven, Conn., for president; for vice-presidents, Herman Merkel, of New York; John McLaren, San Francisco; Charles Haible, of Newburgh, N. Y.; J. H. Prost, Chicago, Ill.; Carl V. Fohn, Colorado Springs, Colo., and John Henderson, of Montreal, Canada; for secretary and treasurer, R. W. Cotterill, of Seattle, Wash.

It was unanimously decided to hold the next convention in San Francisco, Cal. Invitations were received from San Francisco, Chicago, Dayton, O., Terre Haute, Ind., St. Louis, Galveston, Tex., and Chattanooga Tenn.

The matter of trade exhibits at the conventions was suggested, but aroused considerable opposition and no action was taken in the matter.

It was moved that a letter of thanks be sent to Mrs. Harriman.

A vote of thanks was tendered the retiring secretary, J. J. Levison, of Brooklyn, N. Y.

L. D. Cox, of Los Angeles, Cal., invited the visitors to the next convention when on the coast to spend a day in that city.

F. L. Mulford, of Washington, D. C., distributed blanks and requested reports from members regarding the dates of budding, blooming, etc., of trees and shrubs.

The retiring president called the officers-elect to the front and introduced them to the members, after which the meeting was adjourned.

The steamer arrived in New York at 7 p. m.

On Thursday, August 27, the day began with an informal reception in the lobby of the Hotel Astor. At 10 o'clock a meeting was held in the ballroom of the hotel.

The visitors were welcomed to the city by Mr. Bruere, city chamberlain, representing the Mayor. He said that it spoke well for the members that they were able to assemble at so early an hour after a night in New York City. He wanted the visitors to go about with a critical eye and point out the defects rather than the excellencies of the parks of the city, and wished they could visit some of the many localities that need parks.

"Central Park is a wonderful park, not because of its beauty, but because it is so extensively used. New York City, like most other big cities, is confronted with

the necessity of more facilities for recreation. In fact, a park superintendent of today must of necessity be a recreation expert." He hoped that, unlike many visitors, they would carry away impressions other than obtained from Broadway, Wall Street and Coney Island.

The Hon. Cabot Ward, president of the Park Board, added to the welcome of the city chamberlain. He said: "We want ideas from everywhere." Their problem was that of a small park area in a tremendously congested population. Now, to preserve the beauty and at the same time give the visitors the full benefit of the parks, all parks need the co-operation of those who use them, and that is one of the chief aims of the officials of the city.

The response of President Richards was

brief, but to the point, and was heartily applauded.

The visitors then started on a fifty-mile run through the park systems of Manhattan, the Bronx and Brooklyn. The places visited included Central Park, Riverside Drive, Van Cortlandt Park, New York Botanical Garden and the New York Zoological Park. At the "Zoo" the visitors enjoyed a lecture, illustrated by real life, on wild animals, their habits and peculiar characteristics, by Vice-President Merkel. An excellent full course chicken dinner was served in the restaurant. Then a 25-mile trip through Eastern Manhattan to Prospect Park, Brooklyn, via the Ocean Parkway to Coney Island, where one of the most enjoyable conventions of the association terminated without ceremony.

PRESENT DAY PARK PROBLEMS

An address before the New York Convention of Park Superintendents, by H. S. Richards.

The present day rush for improvement, advancement, efficiency, at any rate for change, under a banner blazing with the word "Progress," has disturbed the complacency of a score or so of years ago with which the park official, along with the rest of mankind, looked calmly out over the area of his activities with confidence in his knowledge of requirements and in the possession of ability to meet them. A quarter of a century passes, and today, in the darkness of his vision, he flounders about in the bogs of uncertainty, asking for light and firm ground on which to devise methods to meet heretofore unthought of demands.

It would be like carrying coals to Newcastle to even enumerate, much more so to describe to the assembly, the astonishing changes that have been brought about in park service. You are all well acquainted with them and have, no doubt, like myself, been greatly puzzled as to how to meet the requirements efficiently and economically. Our efforts in many directions are still in the experimental stage. The great awakening of the people to the value of properly constructed and operated playgrounds and the ever-increasing use of that erratic instrument of efficiency, the automobile, have presented for consideration many questions not only in the fields of recreation, instruction, hygiene and policing, but also in construction and maintenance. I shall at this time only briefly mention two other of the problems which make for our unhappiness and which we are trying to solve, leaving for future discussion the presentation of more detailed information.

One of the most important of these problems, it seems to me, is the finding of a suitable material for the surfacing of children's playgrounds. While the ideal surface may be a carpet of grass, it is impossible to maintain such a surface in a busy playground for any length of time, and

then it is not available at all seasons of the year, nor can it be used for some time after a rain. From a practical standpoint the ideal playground surface should be one that will be neither too hard nor too soft, muddy or dusty, and that can be kept in a sanitary condition by a daily flushing with a hose.

Among the materials tested in the city of Chicago may be enumerated the following: Sifted cinders, crushed limestone, a light coating of torpedo sand over a heavy black loam, cork asphalt and granulated slag. Several of these materials possessed some of the qualities desired, but also had disadvantages which rendered their use undesirable for the surfacing of public playgrounds. Cinders were found to be too harsh and gritty as well as too dusty for this purpose, while the limestone soon became loose, sharp stones appearing on the surface.

For several years the playgrounds of Chicago's South Park system have been surfaced with a coating of about one-eighth of an inch of torpedo sand spread over heavy black loam. This kind of surfacing, however, has not been entirely satisfactory. The torpedo sand was soon ground into the loam beneath, destroying the hindering qualities of the latter, and if not kept moist continually, a covering of loose material an inch or so in depth, from which arose considerable dust, was soon spread over the playground. When the dust is laid through the use of water the condition of a playground surfaced in this way is not a sanitary one. If a light oil is used for the purpose the dust is laid very effectually, but the material on the surface still remains loose; the only practical method of overcoming this objectionable feature that has so far been found is to resurface the playground.

A material now being tested as a sur-

facing by the South Park Commissioners is granulated blast furnace slag, which has been placed under the most used apparatus (swings, giant stride and merry-go-round) in a new and popular playground. This material is brittle to the pressure of the foot and not gritty like cinders, a fact attested by the presence of barefooted children in the grounds and using the apparatus where the slag is being tried out without any apparent discomfort. It appears to pack well, but not too firmly under use, and does not seem to become scuffed up very readily. As the structure of slag is porous, it will absorb considerable moisture, which fact makes it possible to wet the surfacing thoroughly in the morning before opening and offer a surface neither muddy nor dusty. A disadvantage, however, is that this material cannot be flushed with a hose. The test has not been in progress long enough to enable me to form an opinion as to the exact value of slag as a permanent playground surfacing material.

After considerable experimenting, I believe that the nearest approach to the ideal practical playground surface that has so far come to my notice is obtained by the use of a mixture of ground cork and asphalt applied either in sheet or in brick form. This material fills all the requirements mentioned for such a surfacing. The South Park Commissioners have two tennis courts paved with sheet cork asphalt which have been in use for several years and have given great satisfaction; they can be used the year around. In one of their children's playgrounds the area under the giant stride has been paved this year in an experimental way with cork asphalt in brick form. The whole subject of playground surfacing is necessarily a new one and merits the attention of skilled investigators in the effort to find one or more materials that will fill

the requirements of this new field in park management.

In the large parks where the landscape gardener's art is still the dominant feature some changed conditions have been encountered, due partly to the larger numbers of people using the parks, following the increase in population, and partly to the wonderful increase of public interest in outdoor sports. A quarter of a century ago tennis was not in vogue as it is at present, while golf in public parks was practically unknown. Efforts to provide tennis court surfacing that will permit the use of the courts at all seasons of the year have led to different experiments. As stated under the subject of playground surfacing, the South Park Commissioners have had in use for several years two courts paved with cork asphalt, and more recently six courts have been paved with a mixture of quarter-inch crushed limestone (small enough to pass a half-inch mesh), torpedo sand and asphalt. All of these have met with great approval from the tennis-playing public.

As is well known, the advent of the automobile during the time under consideration has demonstrated the unsuitableness of macadam driveways for that means of traffic. This presented another problem of considerable importance—the construction of a pavement that would not disintegrate under the wear and tear of automobile traf-

fic and still would be as noiseless and springy as possible for horse traffic. After several years of trial the South Park Commissioners believe such a pavement has been found in what is known as asphaltic concrete, a mixture of crushed limestone and torpedo sand, heated in a revolving cylinder and combined while hot with sufficient hot liquid asphalt to thoroughly cement the particles of the mixture together. It is laid while hot in different thicknesses, depending upon the character and amount of traffic using the pavement.

Another advance recently made is the use of a light distillate oil in place of heavy black oil or water for dust-laying purposes on macadam driveways, gravel walks, bridle paths, ball fields and playgrounds. It has been clearly shown that its use is much less nasty than that of heavy oils and cheaper than water, over which it possesses the advantage of keeping down the dust both day and night instead of only while the surfaces are wet, which is an advantage most beneficial to park lawns and shrubbery. Best results have been obtained by applying the oil in spray form.

Even the policy of park administration in its relation to the people has undergone a change in the past quarter of a century. The watchword of the present is "Service" to the public and assistance to enjoy with

the least restraint possible, consistent with a proper care for life and public property, the facilities for recreation or social enjoyment provided by present day park equipment. Witness, for instance, the removal of the signs which some years ago prohibited the public from using the park lawns. The progress of this policy of public helpfulness is evident in numerous other ways.

It must not be forgotten that the American Association of Park Superintendents was founded during the period of greater expansion of park usefulness and activities, and as an organization has achieved a remarkable success in park and related work. The annual meetings of this association of park officials and landscape gardeners have offered excellent opportunities for the spread of useful information on park management through the interchange of ideas, the presentation of new methods that have been found of value, and the discussion of problems encountered in different parts of the country.

Our success in the past inspires us with the confidence that the problems of park administration now awaiting solution and others that may arise in the future will be met and conquered with the same interest for the public welfare which has in the past testified to our devotion to duty in our chosen life-work.

THE LEGAL STATUS OF THE CEMETERY

By Walter K. Towers, A. B., J. D., of the Michigan Bar.

Not only do the courts apply the laws for our protection while we are living, but they often find it necessary to protect our remains after we are dead. The law recognizes the sacredness of a grave and within certain limits will exercise its authority to protect it.

The control of cemeteries is a matter within the province of the state legislature. The state lawmakers may, and frequently do, enact laws regulating places of burial providing for the establishment of new ones, or the abandonment of old ones.

At the present time it is a common custom for a cemetery association to secure title to a suitable tract of ground. What ground may be used for this purpose is within the control of the state or municipality. Individuals secure the rights of burial in particular lots from the company. They do not take title to the lot, but only purchase a right to use, and the right to such care by the association as is specified in the contract. A written contract or deed is not necessary, an oral agreement being sufficient in law to confer rights in a cemetery lot.

Public cemeteries may become established by general and long continued usage, in which case it is held that the land has been dedicated to use as a cemetery by the original owners. Thus it has been held a good dedication in law where the landowner

stated to people living in the vicinity that land might be used as a place for burial and allowed it to be fenced, improved and exclusively used as a cemetery for a long period of time.

Unless one can be very sure that a neighborhood burial place which has not been secured by purchase by a corporation or association has been legally dedicated, he cannot be assured that graves in it will be undisturbed. In a recent case, the Missouri court very reluctantly declared it had no right to protect a burial ground which had never been dedicated to that purpose by the owners of the land. Later owners insisted on tearing down the old fence and allowing cattle to pasture in the old burial ground. Descendants of those buried in the ground objected and sought to secure by force of law the permission to fence the graves of their ancestors. The court informed them that their only rights were to remove the bodies.

But once a cemetery has been properly established, the courts are inclined to consider only cases of the most obvious necessity. The growth of a city may sometimes make it necessary to move a burying ground or long continued neglect may result in its eventual abandonment. Many state laws have been passed to protect cemeteries from spoliation.

The law is strongly inclined to protect

the individual grave as well as the cemetery as a whole. This is shown by the statement of the court in a recent case where an effort was being made by the accused in a murder trial to have the dead body of the victim exhumed for examination. The court said in part: "Can it (the court), without the consent of the kindred of the dead, invade the sacred precincts of the cemetery, and tear open again and lacerate afresh the hearts of those that loved him, and to whom his memory is sacred and dear? With what reverence do we all regard the graves of our dead, and each returning spring cover them with beautiful flowers. There is an instinct planted by nature in the human breast to feel a strong aversion—almost horror—at the desecration of the grave. The maxim, 'Requiescat in pace' (Let him rest in peace), speaks this feeling. The great dramatist impressively tells his tender emotion in the prayerful epitaph written by his own hand for his tombstone:

"'Good friend, for Jesus' sake forbear
To dig the dust enclosed here;

Blest be the man that spare these stones,
And cursed be he that moves my bones.'"

The conclusion is that a court will only exercise the power, if it has such power, to order the body of a deceased, in a murder prosecution, to be disinterred, when to do so is plainly necessary and essential to

the justice and fairness of the trial and is a matter in the discretion of the court.

While there can, generally speaking, be no property rights in a dead body, the relatives of the deceased have a recognized right to dispose of the remains in a proper manner. A husband or wife is generally recognized as having the first right to care for the remains and select a place for burial. In the absence of a husband or wife, the next of kin has the right and also the duty to provide for the burial. Where the parties most closely connected with the deceased, who have the right of burial, select or agree to a place of burial, that is regarded as final, and the law will not allow a removal except for some necessary or laudable purpose. Where the deceased had clearly indicated a wish as to burial, the courts will enforce it, even though the relatives oppose.

Not only has the nearest surviving relative the right to arrange the burial, but the duty also rests upon him. For failure to fulfill his duty he may be punished in a criminal action.

Whether a man can be punished for failing to provide a Christian burial for his deceased infant was the question raised in a recent case. A child of defendant's having died, he set about to bury it. Taking some pieces of rough board, he made a rude box to serve as a coffin. Although he had good lumber out of which he could have made a better and more presentable box, he said that he did not propose using his good lumber for this purpose. This box was taken to a point in a woods lot and a grave was dug by two neighbors about two feet deep. Defendant brought the corpse from the house in a small box to where the grave was being dug, placed it upon the ground and assisted in digging the grave. When completed, the paper box with the corpse in it was placed in the wooden box and lowered. The grave was then filled to a level with the surrounding ground, defendant assisting in tramping the dirt as it was being put back into the grave. No services of any kind were held at the grave. The court held that it was the right of defendant to select the place

where his child should be buried, and he violated no law or duty in selecting a spot in the woods, rather than in a cemetery. There is no rule of law defining how a corpse shall be dressed for burial, or the character of coffin or casket in which it should be inclosed, or the material out of which the box shall be made, or the depth of the grave; nor is it an offense not to notify relatives and friends so that they may be present at the interment, for they have no legal right to be present. There is no law imposing upon those having in charge the burial of the dead any duty to have the interment accompanied with religious ceremony. The court said in conclusion: "It was no doubt the extreme miserly and niggardly disposition manifested by appellant that aroused the indignation of his neighbors, causing the indictment, and ultimately induced the jury to assess the fine against him, which they did. While by the facts in the record the appellant is shown to be a man utterly lacking in parental instincts, he has kept himself within the pale of the law."

PROGRAM FOR A. A. C. S. ST. LOUIS CONVENTION

The complete program for the twenty-eighth annual convention of the Association of American Cemetery Superintendents to be held at St. Louis, October 6, 7 and 8, printed below, is one of the finest programs for educational work and discussion ever prepared for an A. A. C. S. meeting, and a good attendance and an interesting meeting is assured.

Headquarters will be at the Planters' Hotel, and rates and other details were given in our last issue.

The complete program is as follows:

First Day—Tuesday, October 6. Morning Session, Planters' Hotel, 10 o'clock.

1. Meeting called to order.
2. Opening prayer.
3. Address of welcome by Hon. Henry W. Kiel, Mayor of St. Louis, Mo.
4. Address of the President.
5. Report of the Secretary-Treasurer.
6. Communications.
7. Appointment of committees.
8. Half hour with the Secretary-Treasurer.

Afternoon Session, 2 o'clock, Planters' Hotel.

1. Paper, "Brains and Muscle Wanted," by W. N. Rudd, president of Mt. Greenwood Cemetery, Chicago.
2. Discussion.
3. Paper, "Monuments and Other Memorials," by James Currie, superintendent, Forest Home Cemetery, Milwaukee, Wis.
4. Discussion.
5. Paper, "More About Mausoleums," by Frank Eurich, superintendent, Woodlawn Cemetery, Detroit, Mich.
6. Discussion.

7. Paper, "The Cemetery and the Monument Man," by Alex Hanton, superintendent, City Cemeteries, Barre, Vt.

8. Discussion.

In the evening the members will have an opportunity to view the procession of the Veiled Prophets.

Second Day—Wednesday, Oct. 7. Morning Session, 9:30 o'clock, Planters' Hotel.

1. Paper, "Concrete Enclosures," by Bellett Lawson, Jr., secretary-manager of Elmwood Cemetery, Chicago.
2. Discussion.
3. Paper, "A Few Hints on Old Fashioned Flowers," by John Reid, superintendent of Mount Elliott and Mount Olivet Cemeteries, Detroit, Mich.
4. Discussion.
5. Paper, "Care of Lots and Monuments," by Charles T. G. Flaherty, superintendent of St. Agnes Cemetery, Albany, N. Y.
6. Discussion.
7. Nomination of officers.

Afternoon.

The members will assemble at the Planters' Hotel at 1 o'clock and take automobiles for principal points in the city and through the parks and cemeteries.

Third Day—Thursday, Oct. 8, Forenoon.

Members will take cars for the Missouri Botanical Gardens. Officers and guides will be ready at the Gardens to show members around and explain about the various plants. Noon—Luncheon at the Gardens.

Afternoon Session—1:30 o'clock, at the Gardens.

1. Paper, "Ground Covering," by O. C.

Simonds, landscape gardener, Graceland Cemetery, Chicago.

2. Discussion.

3. Paper, "Calvary Cemetery: Its Features," by J. J. Cunningham, superintendent, Calvary Cemetery, Long Island City, New York.

4. Paper, "Flower Displays Without Rain," by William Ohlweiler, general manager of Missouri Botanical Gardens, St. Louis, Mo.

5. Paper, "Pictures in a Park Cemetery," by John Noyes, landscape designer, Missouri Botanical Gardens, St. Louis.

6. Reports of committees.
7. Election of officers.
8. Unfinished business.

Adjournment.

Officers for 1914.

President—M. P. Brazill, Calvary Cemetery, St. Louis, Mo.

Vice-President—Thos. Wallis, Rose Hill Cemetery, Chicago, Ill.

Secretary-Treasurer—Bellett Lawson, Jr., Elmwood Cemetery, Chicago, Ill.

Executive Committee—W. H. Atkinson, Riverview Cemetery, Trenton, N. J.; F. R. Diering, Woodlawn Cemetery, New York, N. Y.; Wm. Falconer, Allegheny Cemetery, Pittsburgh, Pa.

Convention Committee for the St. Louis Convention—F. Hotchkiss, Bellefontaine Cemetery, St. Louis, Mo.; J. Leuthge, New Pickers Cemetery, St. Louis, Mo.; J. A. Schmiemeier, St. Matthews' Cemetery, St. Louis, Mo.; A. E. Todt, SS. Peter and Paul Cemetery, St. Louis, Mo.

THE MONUMENT AND ITS SURROUNDINGS

An address before the National Retail Monument Dealers' Association Convention at Milwaukee, August 20, by James Currie, Supt., Forest Home Cemetery, Milwaukee.

Monument dealers, as well as many lot owners, are not all in full accord with all the ideas of cemetery officials relative to monumental structures, neither are they all willing to admit primarily at least that all cemetery rules and regulations are necessary, consistent, fair, and impartial; hence the cemetery superintendent who is expected by the trustees, whom he represents, to do his duty and guard well the interests of the management and welfare of the lot owners, may well but with reasonable expectations of sympathy from his brothers in the profession, quote the immortal lines "Uneasy lies the head that wears a crown."

With these thoughts in mind I was reluctant to consent and at first inclined to tender my thanks, ask to be excused and thereby avoid the responsibility the subject would impose upon me; but on more mature consideration I became impressed with the belief that this was an opportunity afforded me in good faith and in the most friendly manner by your program committee to express my opinion publicly relative to monumental art in the cemetery.

I do not wish in these preliminary remarks to convey the impression that any hesitancy I felt was in any measure due to a fear that I would be confronted by a spirit of antagonism and unfriendliness, for I feel confident from experience that by far the greater number of men of your profession are fully in accord with a policy which manifestly aims at a higher development of the cemetery and promotion of the best interests of its lot owners. My only fear is that I may fail to present the subject impressively and as I would hope, convincingly; but craving your patience and indulgence I shall endeavor to catch a little inspiration which may enable me to enlist your interest and invite your co-operation towards the improvement of monumental art and a higher development of landscape in cemeteries wherever your influence may extend throughout our broad land, and I trust I may succeed in explaining to the entire satisfaction of all present, the reasons why the management of Forest Home Cemetery is somewhat insistent in the observance of certain rules and regulations, which I am painfully aware appear to certain individuals in your profession as arbitrary and unwarranted.

As I did not have the choosing of my subject or the designation of its title, I may be excused if I fail to respond to the motive your committee had in view; but I apprehend the subject "The Monument and Its Surroundings" was intended to be considered in a two-fold but co-relative aspect. In other words, I believe I am expected to primarily consider the monument in its relation to its environment and not except in

a very general way in its architectural features, a phase of the subject which has been assigned to another speaker better qualified than I am to address you authoritatively on the architecture of monuments.

The monument, as you are well aware, is a factor which is no longer accepted as a matter of course or considered an essential feature to be received in the cemetery by the management with indifference, on the supposition that its selection and erection is the inherent right and privilege of every lot owner, regardless of all other considerations. In many of the leading cemeteries, particularly those laid out on the lawn or landscape plan, monumental structures are supervised and studied by the management with the same attention and care as all other features essential or incident to the planning and highest development of the general scheme, that the cemetery may be a credit to the management, a source of pride to lot owners and an acknowledged beauty spot in the community. Towards that end the co-operation of the several interests is desirable so that the plan in all its features may be carried towards completion in perfect harmony and to the entire satisfaction of all concerned.

It is perhaps natural for dealers in monuments to view with concern amounting almost to resentment the attitude of the management of the modern landscape cemetery towards monumental structures in general. Extremists would eliminate the monument entirely, which they aver is disturbing to the quiet and repose which should reign supreme in the last resting place of the dead. They maintain that architectural features in the cemetery are discordant in association with Nature's adornment of trees, shrubs and flowers. A noble or well developed tree is considered by these devotees of the landscape cemetery a more appropriate and grander memorial than the finest structure of stone that can be produced. It is an indisputable fact, as all fair-minded, discerning men of your profession must admit, that the landscape cemetery with its broad stretches of level lawn and undulating surfaces clothed with beautiful velvety grass, its graceful, curving avenues and walks, its diversity and artistically arranged groups or beautiful individual specimens of trees and shrubs with here and there a touch of color produced by a skillful setting of hardy or more delicate flowering plants; is a plan of cemetery which appeals strongly to persons of artistic temperament, is in harmony with progressive ideas and elicits the approval and admiration of everyone who has the slightest appreciation of beauty. Who is there now who would prefer the old time graveyard with its incongruous assortment and multiplicity of

curious and inartistic monuments and tombstones, which the scraps of lawn and few trees or shrubs fail to obscure or distinguish the place from some unusually large, untidy and badly arranged stoneyard. But alas, are we not all familiar with more than one modern cemetery admirably adapted by Nature and originally designed, as the plan still indicates, for a place of beauty, but now utterly and hopelessly ruined in appearance by a vast number of ill-assorted and misplaced monuments, many of them very poor, or merely passable in design, yet here and there we may observe a really beautiful and meritorious structure; but with beauty marred by its dominating bad surroundings?

I am not one of those who believe that a cemetery may at the present time satisfactorily serve its purpose entirely without monuments. The time may come when the erection of monuments and other memorials in the cemetery may be abandoned. Whether or not that is a consummation to be wished or whether it may ever occur is idle to discuss and is at least foreign to our present purpose. While it is true there are many owners of lots and the proportion is apparently rapidly increasing, who are not in favor of monuments and will never erect any structure on their own lots except index stones of very simple design, yet there are many who wish to give expression to their sentiments by the erection of some suitable memorial. In these you and I are at present interested, and it should be our first consideration to promote their best interests in conformity to the general policy of the cemetery. The evolution in monumental art in the cemetery, dating from a comparatively recent period, has been really wonderful in its progress and achievement. Our cemeteries are at the present time replete with many of the finest conceivable examples of the designer's art and the artisan's skill. Stately mausoleums rivaling in beauty the most famous structures of ancient Greece and Rome and handsome, costly monuments and memorials in almost endless variety abound, yet one of the problems confronting us today in the further development and maintenance of the cemetery with some approach to the ideal, is the achievement of a fuller appreciation of monumental art, and by that I mean a truer conception of the art of designing for intelligent expression as well as beauty, and a better and more general understanding of the artistic relation of the monument and its environment. Until those two ideas are co-relatively considered in the study of a monument we cannot hope to produce perfect harmony in the selection and arrangement of monuments in the cemetery.

It seems almost superfluous for me to suggest to men of your profession the several considerations generally recognized as important in the designing of a monument, but you will pardon me if I enumerate a few leading principles for the sake of emphasizing their importance: A monument should be definite in style; it should be appropriate to location, and in harmony with its environment; it should indicate purpose and perhaps express some well-defined sentiment; it should be original and expressive of individuality and personal selection, for which reason it should be essentially different from any other monument in its vicinity or even when practicable in the same cemetery. I wish in this connection to particularly emphasize the importance of location the structure is to occupy. In my study of monuments suitable for cemetery lots, I have been particularly impressed with the influence of environment on the monument itself and the effect produced by the monument on its surroundings. The impression may be disagreeable and disturbing, or suggestive of satisfaction and repose according to whether or not their relationship is harmonious. Many an excellent monument, beautiful in its design and general characteristics, and faultless in its purity of style and proportions, has proven a disappointment merely because it was inappropriate to location or out of harmony with its environment. In many instances a beautiful piece of landscape or vista, so dear to the management of the cemetery and so satisfactory to the lot owners, has been utterly destroyed by the erection of an ill-adapted monument. One monument of inharmonious design may ruin a large area or create a discord by dominating all other structures in the vicinity. The lot owner contemplating the purchase of a monument, if not skilled in this branch of art, should invite expert advice and a dealer or artist should first ascertain by personal observation if possible the location of his client's lot, its elevation, distance from the avenue or points of observation, general contour of the ground, the monumental structures and even trees intended to be permanent in the vicinity, and, having determined to his own satisfaction, the style of monument best adapted, he should freely and fearlessly offer suggestions and submit designs he knows to be suitable and, when necessary, use intelligent and logical arguments to dissuade his client from the selection of some inappropriate thing which perhaps had previously appealed to his fancy.

My observations prompt me to offer a few suggestions in the selection and placing of monuments. For example, more than one monument of a design similar in general characteristics, although differing materially in detail, should not be erected in the same vicinity. A proneness exists to duplicate good designs, which is to be deplored. The practice is manifestly unfair

to the original owner, creates monotony, suggests lack of interest or creative genius on the part of the designer and an indifference to expression of individual ideas and taste on the part of the purchaser. Duplications should therefore be avoided in the same neighborhood, or better still, in the same cemetery. Few spire monuments should be seen from any one point of view. A spire or obelisk is usually misplaced in the foreground, especially if close to the avenue. Low monuments should predominate in such locations. The spire should never be set on a steep side hill. It is seen to best advantage on a gentle slope on comparatively high ground and at some distance from the avenue, not against an unbroken sky line, but backed by a good sized specimen or group of trees. A very artistic effect is often produced by a spire erected at the further end of a gradually narrowing vale. In itself the shaft may appear well in a hollow or on a level piece of ground, but in such a location it generally detracts from the landscape. Valleys may be ruined in effect by erecting a shaft or other tall design in the foreground. Gentle undulating surfaces should be preserved in appearance. The effect may be accentuated by selecting low monuments for the lower levels and higher designs on the rising and more elevated ground. The crest of an abrupt rise, especially close to an avenue, suggests a low monument. In referring to high and low monuments, the terms are used in a relative sense. There should never be uniformity of sizes in any group or locality. It would be as abhorrent as uniformity of design. Variety within well ordered and artistic limitations is most desirable. Except on very large lots in open sweeps of lawn or at an abrupt corner of a section very broad styles of monument such as the exedra are, I think, obviously out of place. These designs should be given a place in the background where a proper setting of shrubbery may be introduced without detriment to other lots in the rear. These remarks, however, are only general and merely intended to be suggestive.

I think it is reasonable to assume that all designers and dealers in monuments would prefer to have their clients select good designs, plain or ornate, classic or modern, large or small, as the case may be, but in any event good, possessing merit worthy of commendation rather than a poor or mediocre design, a meaningless pile of stones, or worse still, one of those composites of recent introduction which when well executed, as it must be admitted many of them are, serve only to display the wasted efforts of a first-class workman, emphasizing a total lack of appreciation of true art, perhaps even displaying an ignoble purpose on the part of the designer to produce something flashy, made in some instances all the more attractive to the uninitiated and credulous public when covered with a misplaced medley of cunningly interwoven emblems

and imitations of art and nature. I would be sorry to think, and difficult to persuade that any artist or reputable dealer in monuments could be so bereft of pride in his profession as to be wholly satisfied with the sale of any kind of monument, having no more interest in the matter than to make the sale, erect the work safely, satisfy his customer for the time being, and secure payment of his bill. It is true I have known of such cases, but I have always preferred to think that the dealer felt compelled by the attitude of his client, the fear of competition and perhaps a pressing necessity for business, to coincide with suggestions with which he was perhaps not in full accord, but forced to accept for the time being by stern circumstances. The lot owner may be qualified to make a selection, he may have well-defined ideas of what would please himself and a due appreciation of the style of monument that would be most appropriate to the location. He may be unbiased and swayed not by personal motives but by the high-minded principle of co-operation. If he possesses these qualifications the problem is usually easy of solution, but if he is not disposed to give heed to these conditions or through lack of knowledge of monumental art, is unable to act intelligently, it is clearly the duty of someone to assist, persuade, or even when necessary, compel him to conform to the regulations of the cemetery. It is evident that the management of the cemetery must in most instances assume this responsibility. This necessitates the adoption and enforcement of regulations governing monumental structures not only in their construction and material to insure stability and permanency but in their design and arrangement to obtain individual beauty and harmony in relation to their surroundings. No matter how well conceived the plan of the landscape engineer may be for the laying out and development of the cemetery with a view to creating and maintaining a place of beauty, the ideal can never be achieved unless the plan is adhered to and carefully executed in all essential details.

The dealer may advise, but can he be expected to interest himself to the extent of possibly incurring a controversy with his client? I think not. Can he consistently suggest and even urge upon a customer the adoption of some good and commendable style of monument well suited for his lot and location or advise him not to select and even decline to sell anything likely to be objected to by lot owners in the vicinity and by the management of the cemetery? I think he can, and with advantage, credit, and profit to himself, as I shall endeavor further on to show.

In this connection I desire to offer the following suggestions: When a dealer is sure or has good reason to believe that a design he has in his collection or a monument he has in stock, would be objectionable to the management of the cemetery in which a prospective purchaser has a lot, he would do well not to present it; and should such a monument attract attention, he should frankly say it would not be accepted. If he has a reasonable doubt about the acceptance of a monument which is being favorably considered by a customer, he should counsel delay until he had submitted the design to the superintendent of the cemetery and learned his decision. He should never make a contract until all questions at issue are settled. When any monument or memorial is to be erected in any cemetery having regulations governing the same, it is always advisable for the dealer or the person about to make the purchase to submit the design to the authorized representative of the cemetery, usually the superintendent, for approval before the purchase is arranged and the contract made. I much prefer to confer with the lot owner if necessary before the dealer has done more than merely offer the suggestion that as all designs have to be approved by the superintendent of the cemetery it would be well to submit the one selected before a final choice is decided upon and a contract made. If in this the dealer is careful he would avoid complications and perhaps some personal responsibility and often facilitate the consummation of business. In some cemeteries, including Forest Home, this is now obligatory so as to properly supervise monumental work and avoid complications and disputes. The dealer who sells a monument which is objectionable to the management of the cemetery and is perhaps rejected, lays himself open to discredit, perhaps the censure of his client. To plead ignorance of rules or say that he thought it would be all right will not always excuse him. The natural inference is that he must have been fully conversant with the rules of the cemetery but was apparently principally interested in making a sale and hoped by making no allusion to these rules to secure the order and make a contract which might be considered binding by his client, who would be expected to arrange with the cemetery authorities himself for the acceptance of the monument bought or a satisfactory substitute. My experience has demonstrated that such methods have cost dealers the loss of orders which they thought they had secured. On the other hand, if the dealer is candid with his client, and among other things informs him of the regulations of the cemetery and suggests

submitting the design or designs primarily for consideration and approval, he will in all probability inspire confidence and respect, which every salesman knows is of first importance towards securing a favorable consideration of any proposition he has to present. I have been told by certain dealers that the reason why they do not in some instances inform prospective purchasers of monuments of our rules and regulations before closing a deal is the fear that the customer may be incredulous, attribute the statement to some ulterior motive and go elsewhere to the advantage of a competitor. While it is undoubtedly true that occasional orders which were apparently almost secured have been lost because the customer concluded to look at the designs and get the prices of other dealers before deciding, I am persuaded it was the more attractive design and perhaps the lower price of the competitor which won, factors always to be reckoned with in competition. Designs being equally acceptable and prices approximately the same, I believe in most instances a customer will decide in favor of the dealer who has been candid and straightforward. I wish to say before closing this part of the subject that in every instance so far as I know where I have felt obliged to reject a design submitted, the lot owner has been able to select another monument more satisfactory to himself, equally and even more profitable as well as much more creditable in many cases to the dealer.

I do not wish in my discussion of this subject to direct attention to Forest Home Cemetery as an example to be emulated but rather as a warning, for I am painfully aware that in places, particularly in some of the older sections, monuments and tombstones of almost every description are obtrusive to a degree that is decidedly unfortunate and objectionable. There are, however, throughout the cemetery many really good monuments, but unfortunately some of them have been conspicuously misplaced in relation to their environment. Even the lot owners, many of whom were responsible in large measure for this condition, deplore it and regret that the Trustees had not sooner adopted more stringent regulations. It is not my intention to apologize for any laxity on the part of the management of the cemetery in by-gone days when, in common with the practice in cemeteries in general, lot owners were permitted to exercise their own taste and judgment very liberally in the selection of monuments on the supposition that being granted the privilege of erecting a monument and index stones, the purchaser and owner of a lot had a special right to a memorial of his own choos-

ing. But realizing the duty they owed to lot owners and to their successors, the trustees of the cemetery resolved many years ago to introduce measures to promote improvement in the landscape, the monumental structures, and other features in the cemetery, that it might be more in harmony with modern ideas. The regulations first adopted were lenient and somewhat educational for the purpose of gradually instilling into the minds of lot owners and others interested a due appreciation of higher ideals. Later more stringent rules were introduced and are now consistently enforced when necessary for the promotion of the general good of the cemetery and the welfare of the majority of its lot owners.

In conclusion I wish to say that lot owners in our modern cemeteries are in a sense members of a community in which individual interest should be subservient to mutual welfare. All are therefore expected to conform to the adopted policy, and cheerfully co-operate in all matters appertaining to the plan and management of the cemetery. In general there is ready acquiescence but the monument is often a source of contention which might easily be avoided if each prospective purchaser of a monument or other memorial would carefully consider the situation and environment of his lot and the style of structure best adapted to meet all requirements. If he lacks ability to make a proper selection he should wisely avail himself of the assistance of someone capable of advising him and defer to his opinion. In this the monument dealer may lend valuable assistance, which should be unbiased, with due consideration of all interests involved. His clients naturally command his first attention and it should be his greatest endeavor to serve them faithfully and to their entire satisfaction. But I am persuaded by observation and experience that he can best serve them and contribute to their lasting pleasure by inducing them when necessary to select a memorial different perhaps from that of their original fancy, but possessing real and artistic merit adapted in all respects to its surroundings with due regard to landscape effect as well as relation to other structures in the vicinity, and differing essentially from these or perhaps all other similar structures in the same cemetery, that personal interest and selection may be evinced and individuality expressed, which not only contributes to the general attractiveness of the cemetery but avoids possible offence to anyone, affords the owner the supreme pleasure of originality and redounds to the credit of the designer and monument dealer. To this end I can confidently assure you of the hearty co-operation of all cemetery officials.

PRACTICAL POINTS ON CEMETERY MANAGEMENT

*From the Proceedings of the First Annual Convention
of the Association of Cemetery Officials of Canada.*

Flowers in the Cemetery.

I have found flowers of great benefit to the cemetery of which I have charge. In the first place, why do we grow flowers? Is it not for the love of the beautiful, which creates a strong current of affection for your fellowman? There is nothing more welcome to the sick-chamber than a bunch of flowers, neither is there anything that brings to the front the finer qualities of man, than placing regularly a few cut flowers on the grave of a departed loved one, whether they be the finest rose, lily, or only the simple ox-eyed daisy.

In my cemetery I have planted some five hundred beds and borders, and about seven hundred and fifty vases. These are increasing every year, and with the increase is greater desire on the part of the lot owners to have some special care taken of their lots. We grow very largely our own flowers for cemetery use, and find it a great benefit in encouraging lot owners to decorate their graves. Previous to our undertaking to do this work, people would inquire as to where they could procure flowers, and the cost of the same, and on being told of the florist, went away intending to have them sent to the cemetery, and have either forgotten or changed their minds before ordering. Now, instead of forgetting or changing their minds, they order from us, and often wait and see them placed on their lots. This may seem hard on the florists, but, as I have already pointed out, in nine cases out of ten they would not get the business anyway. Two of the florists in our city have turned over all their cemetery business to the cemetery, as they find it more profitable to grow for city trade only, as the cemetery business took up too much time during the busy season.

And now to come to the financial end of it. We do not make a large profit out of growing flowers, as we try to sell to the lot owners as near to cost as possible; but we are able to keep our staff of experienced men through the winter, who are acquainted with cemetery work, which you will all understand is a great benefit to a small cemetery, where only one general foreman is kept and no section foreman.

Now, as to planting of beds and placing of vases, we have not yet placed a limit on the amount to be placed or planted, and although we find some lot owners inclined to overdo the decoration, yet a little persuasion and advice usually prevails. In some sections the planting is quite thick, yet the general effect is pleasing, and strangers passing through often remark on the wealth of flowers displayed.

Some years ago it was the custom to

have nothing but white or delicate shades of flowers, but now it is the opposite; the more brilliant display you can make, the more it seems to please.—Frank Wise, Peterboro, Ont.

Mr. Rutherford—We do not in our cemetery encourage very much planting of flowers; my contention is that flowering shrubs flowering from early spring to fall give a better appearance to a cemetery than flowering plants. We buy our stock cheaply every year from the florist, because he takes them up again in the fall, and we are not able to plant any flowers with good results before the first of June on account of the cool nights, so that the season of flowering plants is very short. In our grounds we restrict planting flowers to a border around the base of monuments.

F. D. Clark—I have listened with much pleasure to Mr. Wise's paper. I, myself, prefer the landscape effect in cemeteries; I would cut out the planting of flowers on graves, but they are all right around the foot of the monument.

Mr. Foord—In my experience as a lot owner I would prefer to have an urn in which to place flowers, or something in that way.

Mr. Wise—I find that planting of flowers encourages the lot owners to spend money on their lots, and to keep them in good condition. It is also a source of revenue to the cemetery.

Rev. W. L. Baynes-Reed—I would not favor doing away entirely with the planting of flowers since it is a means of inducing the friends of the departed to visit the graves of their loved ones, and so encourage and maintain feelings of kindness and tenderness. If there were no placing of flowers upon graves people would pay fewer visits to the cemeteries.

Mr. Rutherford—For another reason I would advocate the planting of shrubs, as they hide, to some extent, the overcrowded monuments in a cemetery.

Cemetery Road Building.

The suction caused by the tire of the motor car has caused us to improve the ordinary macadam road by adding a binder of sufficient cohesive power to withstand the destruction. Several are of a bituminous product, also Rocmac and binders of its character.

Cost of materials vary in different localities, therefore we must adapt wants to local conditions to give the best results.

While some advocate roads varying from 30 to 40 feet wide for cemeteries, a good constructed road 24 feet will allow any vehicle to turn and 20 feet will serve for any road except entrance and main road.

In laying out roads on main avenues preserve a boulevard of not less than six feet; this prohibits monuments from mar- rying the landscape view of a well laid out avenue which provides space for drains, water service and telephone conduits. On lateral avenues three to four feet of reserve will be sufficient.

On fixing grades of roads, do not trust to the eye, as the road which is to please when finished is the one where grades are carried out on practical engineering lines.

The thickness of metal to withstand a given pressure varies according to the formation of the undersoil; a loose formation, such as sand, requires more metal than a shaly clay bottom. In road building we all agree that the essential point is a waterproof road; without this the road is soon cut in ruts and wears in depressions.

This short paper will cover macadam roads only. The best I have found suited for cemeteries is Tarvia macadam, which is dustproof and absolutely waterproof.

It is essential before applying metal to have the roadbed thoroughly rolled as even as possible, crowning the center one-half of the crown of the finished road.

The first bed of metal should be from 2½ to 2 inch stone; largest in bottom for bed 6 inches deep in center and 3 inches at sides when rolled. Before coating with Tarvia fill up voids with small stone to prevent Tarvia penetrating too far into the metal, ⅞ to 1 gallon a yard first coat. The second layer of 1½-inch stone 2 inches deep when rolled well and graded up to an even surface; fill up voids with smaller material, apply ⅞ to ¾ gallon to square yard, then dress with ½ to ⅔ trap rock and roll until you cannot sweep any more stone up and your road is finished.

Care should be taken in spreading metal to turn every shovelful, when dumped upon road. I have seen stretches on the same road made by different men at the same time, with the same metal; on one portion holes wore in a few months because the stone was dumped on the road and simply raked down until the surface was even, making it impossible for any roller to crush the road even and fill up the void.

Where granite or trap is hard to procure, limestone may be used for first or lower course, but never for second and top courses; trap rock should be used for dressing in all cases. The trouble with limestone is Tarvia will not assimilate with the limestone dust which the pressure of heavy loads produce.—W. H. Foord, Toronto.

Mr. Clark—What are your reasons for a six-foot boulevard?

Chairman—It kept monuments from crowding too near the avenue, and provided for landscape planting.

Mr. Wise—A wide boulevard would give you a chance of raising the price of lots along that section, as it would be a more desirable position.

Chairman—It is not a question so much of what the price is; it is the location. We read that death levels all ranks and distinctions, but that idea does not work out in cemeteries. There is still a part of the community that wants the select places. They do not care about the price, therefore we give it to them and charge them up accordingly, and that helps the poor man out and also helps to put the cemetery in an ideal condition.

Building of Foundations.

F. D. Clark—The usual foundation is six feet in depth.

Chairman—Regarding cement construc-

tion, you cannot give any set rule as to how much gravel you would use to the cement; all the cement you require is enough to cover every grain of sand, and coat what stone you put in with enough sand to fill up the voids. If the stone is angular it will not require as much cement as if it be round, such as lake-washed gravel whose rough edges have been worn away, but you cannot lay down any given amount.

One combine controls the cement production in Canada, and sometimes you have to take whatever cement they like to give you. I find National and Star to be the best cement; it is quicker in setting. Belleville cement is very slow, but it makes a good, solid concrete when it has had time to set.

The President—A man can very easily see how much cement his gravel will require to form a perfect block, but when he gets experience in construction of con-

crete he can tell pretty nearly immediately by looking at his gravel how much it will stand. I got my experience by merely separating my stone from the sand in proportion to gravel and working it out that way.

Mr. Clark—The cement combine has done one good thing for this country; they issue a pamphlet of some 110 pages which can be had free of charge. If a man wishes to know how to use and prepare concrete, the information therein contained will help to that end. This work is entitled "The Farmer's Handbook on Concrete Work."

Mr. Foord—I would advise every man who has charge of a cemetery to put his foundation down to the depth of the grave. No matter how small a monument, put the foundation right down to the depth. The foundation should be, at the very least, six feet in depth, and then it will cause you no trouble hereafter.

FIRST MEETING OF BRITISH CEMETERY ASSOCIATION

The first annual convention of the United Kingdom Association of Cemetery Superintendents was held in London on the 15th and 16th of July and proved a successful meeting in every respect.

The members met at Anderton's Hotel, Fleet street, E. C., at 11 a. m. on the morning of the 15th, with a good proportion of the membership present.

The president in a few words welcomed the members to London and hoped they would go back home well repaid for their visit.

At 12 noon the party boarded a motor car that was in readiness at the door, for Hampstead Cemetery, where the chairman of the Hampstead Cemetery Committee and N. W. A. Cochrane, the superintendent, met them at the entrance, and it was soon evident that the members were interested in all they saw.

This fine cemetery is twenty-five acres in extent, and great credit is due to Mr. Cochrane for the manner in which the grounds are kept, and the attention given to the graves and floral displays.

The next stop was at the St. Marylebone Cemetery, an ideal cemetery under the supervision of T. Bevan, known as an expert horticulturist, and from the condition of the grounds it was quite evident that what Mr. Bevan preaches he puts into practice.

Mr. Bevan explained at some length the drainage arrangements of the cemetery which were considered by the members of the association to be perfect.

The members then rejoined the motor and were conveyed to the Great Northern Cemetery. This is a beautiful place, well wooded and an ideal site for a cemetery.

From here the members were taken to Islington and St. Pancras cemeteries, which adjoin, and at the kind invitation of Mr. Bucherfeld and Mr. King tea was par-

taken of in the joint board room at the entrance.

These cemeteries are well laid out and nicely kept. The large range of greenhouses at both places proved a source of interest to the members.

At 7:20 p. m. the members and others assembled at Anderton's Hotel, where a well-earned dinner awaited them, presided over by J. D. Robertson.

The meeting was opened by a pithy speech from the president, as follows:

President's Address.

The old adage "United we stand, divided we fall," comes home to us very forcibly today in almost every walk of life. It is well therefore that we cemetery superintendents, at last hestirred ourselves, and from efforts put forth by a few last years we, today are on the fair road in becoming an association of which we expect things as time goes by.

I may mention in passing that our association is the outcome of a conversation which took place between a few superintendents in February, 1913, at the Guildhall.

Although some years ago an attempt was then made without success to form an association, from the conversation referred to, one of our members sent a circular letter round the London cemeteries, with the result that our good friend, Mr. Tate was able to secure a room at the Kensington Town Hall, and called a meeting.

At this meeting the question of the wisdom, or otherwise of forming an association was fully discussed with the result that there and then a committee was appointed to draw up a report and rules.

Subsequent meetings were held at various centers in London until at last we were able to say we are an organized body, not, let me say to grind any individual's axe, but for the good and welfare of the communities which we serve.

There is no doubt that if we had such an organization, say, 50 or 60 years ago, we would not have to lament the fact today that many of our cemeteries are mere stoneyards.

Planned as many cemeteries were by men with little or no taste or knowledge of landscape gardening, and indeed many of our cemeteries afterwards managed by men trained behind the counter, little wonder if visitors feel chilled and have a horror to enter many cemeteries.

I am sure there is a great future before our association, and with a good committee and an able secretary, such as we have in Mr. Tate, we should impress as much as possible the wisdom and indeed, the necessity, of consulting us on many important questions, such as planning and laying out new grounds, filling positions with fully

qualified men, and other matter of equal importance to the public.

I may mention in passing that we are already taking active steps to have some of the clauses in the deaths registration and burials bill now before parliament, amended. In this and in other directions we purpose making our power felt.

May I take this opportunity to impress upon the members who are here from the province the wisdom of pressing any superintendents they may know in their district to become members without delay. We look to the time when we shall have several branches in the provinces, with London as the center.

I sincerely trust that our country members will go home satisfied with what they saw today and what they will see tomorrow of our London cemeteries, and further convinced with the fact that we in London are out not for self advertisement, but for the good of the whole.

The next item on the program was a paper entitled "The Laying Out, Draining and Planting of a Cemetery," by T. Bevan, superintendent of St. Marylebone Cemetery.

The report of the secretary, C. F. Tate, of Kensington Cemetery, was as follows:

"The association was first formed in October of last year, since when some sixty-two members have been enrolled. Six meetings have been held in various parts of London. The meetings have been well attended and various subjects in connection with cemetery matters brought forward and discussed. The association is in a sound financial condition and I am looking forward to the time when every cemetery superintendent will become a member of this association."

A. Cochrane read a very interesting paper on "The Evolution of the London Burial Ground," which was full of interest to the members and showed that Mr. Cochrane was well informed on the history of the old London burial grounds.

The election of officers resulted as follows:

President—J. D. Robertson, City of London Cemetery.

Vice-President—A. King, Islington.

Secretary-Treasurer—C. F. Tate, Kensington.

Committee—W. A. Cochrane, Hampstead; A. Casselton, Fulham; J. Blackhell, Plymouth; C. Hards, Greenwich; W. G. Hill, Sheen; F. J. P. Loud, Acton; J. N. Sharman, Shooten Hill; G. W. Snow, Wandsworth.

It was voted to hold the annual congress for 1915 in Liverpool and Manchester.

On the second day the members and their wives, to the number of fifty, met at Anderton's Hotel and proceeded by motor through London to the beautiful Cemetery of the City of London.

ASKED AND ANSWERED

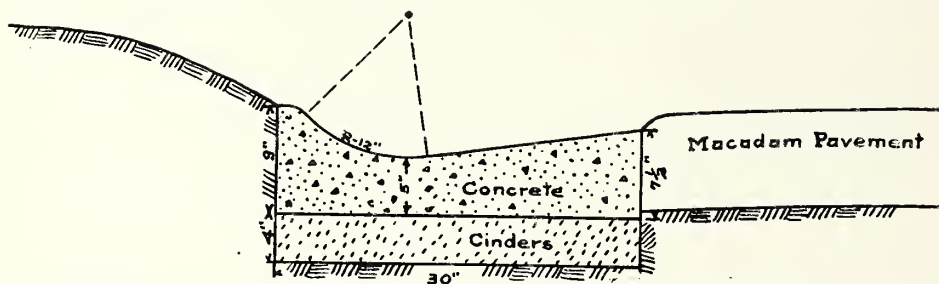
An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

CONCRETE CURB AND GUTTER.

Editor Asked and Answered: "I want to know" if any cemetery has had experience with a combination cement curb and gutter. Will it stand the traffic without cracking or chipping the apron, used on a dirt or cinder road? Also, what width to make the apron and probable cost per linear foot.—L. C., Ia.

I have never used a cement curb or gutter, so am not competent to answer the

As to the width, we will say that a total width of 30 inches is used on wide park roads. This gives a width of about 18 inches from the lowest point to the edge of the apron. A width of 24 inches *total* is probably more suitable for the narrower cemetery roads. It is possible to make a gutter of this character with a total width of about 18 inches, but is usually inadvisable because a sufficient depth would neces-



SUGGESTION BY HARE & HARE FOR CONCRETE CURB AND GUTTER.

question. I do not like curbs or gutters in any cemetery roads, and do not believe they are necessary except in extreme cases. If plenty of inlets are provided and ample sewerage is under the driveway to carry water, gutters would be unnecessary except on very steep grades.

BELLETT LAWSON, JR.

Elmwood Cemetery, Chicago.

We presume that the inquirer, referring to a "combination curb and gutter," means something like the gutter shown on the accompanying illustration. This form of gutter is suitable for a macadam road and so far as we know might be very suitable for a properly constructed cinder road, especially if the surface was bound to prevent washing with some of the tar or asphaltic binders used on macadam roads. It will be noticed in the detail that the road should be constructed an inch or so higher than the apron of the gutter at the point of joining, to prevent washing or wear from wagon wheels at this point. Because of the impossibility of getting this shoulder in a dirt road, we think it would be inadvisable under ordinary conditions to use this form of gutter.

The edges of the apron would not crack or chip if the road meets in this way, and if it is of sufficient thickness, good material and properly bedded.

sitate a very steep slope from the road to the low point. The cost per linear foot would vary greatly in different parts of the country and according to width. Probably about 35 cents would be the average.

Kansas City, Mo. HARE & HARE.

* * * *

Replying to your correspondent who inquires about cement curb and gutter combined, let me say that some twelve years

ago I laid about a mile of such gutter on a private estate, and they have stood the traffic very well indeed.

The roads had a Telford foundation with broken stone over and were built full width, extending under the gutters, so that the latter replaced the upper four inches of broken stone. They were laid with expansion joints every six or eight feet, and the only cracks occurred at the catch basins that took up nearly, but not quite, the full width of the gutter, leaving a narrow strip of cement between the iron and the road. Although it was before reinforced concrete had gained its present popularity, it did not take long to find out that a piece of twisted fence wire imbedded in the concrete at the critical points prevented cracking, and the gutters have proved very satisfactory. They were laid only on the steeper parts of the roads, 5 per cent grade or over, to prevent washing, but in spite of their success I shall not advise their use except on straight roads or where the cost is of no consequence. In order to look well they must be laid true to curve and grade; the least deviation shows and remains an eyesore for ever after. On the job in question I found it necessary to have tack stakes every six feet or so, both for line and grade, and the staking out and laying of forms on the curved stretches cost considerably more than the cement work itself. If the gutters are laid with less care they fall below even cobblestone or brick gutters in appearance, and that is saying a good deal.

A glance at the attached photograph will show that any little irregularity in line or grade would spoil the grace of the curves, and, of course, it is necessary that the lines and grades, even at odd junctions of roads, as the one shown, must be worked out minutely on paper, and worked out right, as no adjustment is possible after the gutter is laid.

New York, N. Y.

OTTO SONNE.



CONCRETE CURB AND GUTTER ON ESTATE OF SENATOR NELSON W. ALDRICH AT WARWICK, R. I.
Otto Sonne, landscape architect.

CREMATION ASSOCIATION CONVENTION.

The Cremation Association of America held its second annual convention at Indianapolis on September 3 and 4, 1914. The attendance covered the breadth of the continent, as delegates were in attendance from Boston, New York, Rochester, Buffalo, Pittsburgh, Cleveland, Detroit, Cincinnati, Chicago, St. Louis and Los Angeles. None responded from the South, as a line from Baltimore through Cincinnati and St. Louis to Los Angeles marks the southern location of crematoriums. The sessions were held at the chapel of Flanner and Buchanan's Crematorium. Technical subjects as "Crematory Burners," "Gas Incinerators," "Cremation Propaganda," "Columbariums," "Funeral Urns," etc., took precedence.

E. H. Ford, of New York, representing a firm of engineers in London, presented quite a number of views of a very expensive cremation plant recently erected in Buenos Ayres.

More subjects, however, of a general nature were considered than at the former convention.

Rev. Lewis Brown conducted a special noon-day service in the chapel of St. Paul's Church on Thursday, and that evening gave a lecture in the convention rooms, being a revision of a lecture on "Cremation" delivered some thirty years ago when cremation was scarcely to be thought of, and not by any means mentioned save in such exceptional cases.

Miss Anne S. Hall, of Cincinnati, gave

an address on Friday in which she made use of correspondence with prominent women in Europe and America, giving their reasons for favoring cremation.

A tablet in bronze, giving Frances Willard's beautiful tribute to cremation, was on exhibition, as were two exhibits of elaborate bronze urns.

Hugo Erichsen, M.D., of Detroit, was elected president; G. S. Metcalfe, Buffalo, vice-president; Chas. C. Reynolds, Los Angeles, secretary; Frank L. Cobb, Boston, treasurer.

Buffalo was selected for the convention in 1915.

A special exhibit will be made at the Panama-Pacific Exposition at San Francisco, space for which has been allotted. An agreement has also been made with the exposition management whereby 100 views illustrating cremation will be displayed daily by stereopticon.

Following adjournment, a trip in automobiles over Indianapolis boulevards and to parks and the speedway was engineered by Paul Buchanan and Frank Flanner. A banquet was provided in the evening at Das Deutsche Haus by C. J. Buchanan, president of the Fenner and Buchanan Company, funeral directors and cremationists. At the banquet the humorous poem of cremation in Alaska was very nicely and appropriately read by Mrs. Flanner. Mrs. C. J. Buchanan was presented with an armful of flowers in appreciation of the cordial treatment enjoyed by the delegates.

Cemetery Society held their yearly election of officers at the school house June 17. The officers elected for the coming year: President, Miss Mary Wilson; re-elect vice president, Mrs. Zelma Hucker; treasurer, Mrs. Blanche Richards; new trustee, Mrs. Mary Douglas; secretary, Mrs. Laura Culver.

A meeting of citizens of the vicinity of Sand Creek, Iowa, was held recently and an organization formed, to be known as the Sand Creek Cemetery Association. Officers were elected and plans discussed for beautifying the cemetery. The officers are: President, Allen Schoffner; secretary, H. E. Bushnell, and treasurer, Arthur Ludley.

The contract has been let for grading Rose Hill Cemetery at Macon, Ga.

Oakwood Cemetery, Austin, Tex., has recently placed a contract for the building of a mortuary chapel to cost about \$5,000.

Myrtle Hill Cemetery, of Rome, Ga., recently purchased some property for an addition to the old cemetery.

Work has been started on the lodge gate entrance to the new Forest Hill Cemetery on the St. Charles rock road, St. Louis, Mo. The lodge will contain a large reception room and two offices, with other conveniences. It will be of Carthage stone and tiled roof.

The Center Church Cemetery Association of Wells Township, Jefferson County, O., was recently incorporated by O. J. S. Dougherty and others.

Extensive improvements are being made at the Catholic Cemetery in Antigo, Wis. The work is being carried on under the direction of the Ladies' Aid Society of the Catholic Church.

The bids for the placing of a fence around the city cemetery of Freeport, Ill., were opened recently, but the contract for the work was not awarded.

A cemetery association was formed at Franklin, Ill., recently by Samuel Yetter and others. The object of this association is to create a sinking fund, the interest of which may be used for the perpetual care and upkeep of the cemetery. Temporary officers were elected as follows: C. W. Goodrich, president; A. H. Perry, secretary.

The cemetery board which has charge of Hillside Cemetery, of Marshfield, Wis., will advertise soon for bids for the erection of a building 26x30 feet on the cemetery grounds, which will be used as a rest house, comfort station and a storehouse for cemetery tools.

The County Board of Lawrenceville, Ill., has donated \$300 toward defraying the expense of fencing White House Cemetery.

At a recent meeting of the local cemetery association of Beeville, Tex., the members decided to solicit subscriptions for the general upkeep and improvement of this cemetery.



CEMETERY NOTES

Directors of the Rosehill Cemetery Co., of Chicago, recently declared a scrip dividend of \$3,000,000 on the capital stock of 5,000 shares of beneficial interest in the corporation, which has no par value. The resolution passed by the directors sets out that the assets now exceed \$7,500,000 over and above its capital and other liabilities, and this is regarded as undivided profits. The dividend is at the rate of \$600 a share, and is in scrip, bearing 5 per cent interest, payable only out of future yearly cash income at such times and in such amounts as may be convenient. The minority stockholders regard the action as illegal. H. W. Huttig is president; F. L. Reynolds, vice-president; Joseph O. Morris, secretary, and Frank G. Gardner, treasurer. The directors, in addition to these men, are Thomas Wallace, A. R. Marriott and J. M. Dall. The minority stockholders, through Attorney F. F. Norcross, on August 26 obtained from Superior Court Judge Hugo Pam an order restraining the directorial majority from raising money on

the \$3,000,000 worth of scrip issued by the company. The bill also asks for a receiver, but this, as well as the scrip matter, will be thrashed out in court at a later date.

The St. Boniface Cemetery Association of Quincy, Ill., is the name of an organization that has just been chartered by the state. It is not for pecuniary profit. The directors elected Rev. Father Degenhardt as president, Edward Sohm as vice president, Alfred Kurz as secretary, and George Fischer as treasurer.

Saint Joseph's Cemetery Company at Rock Springs, Wyoming, incorporates to acquire the old Roman Catholic cemetery. The membership is limited to five, as follows: Rev. Patrick A. McGovern, of Cheyenne, bishop of the Roman Catholic diocese; Rev. Anton Schifferer, rector of the Parish of our Lady of Sorrows; Rev. John F. Sugrue, rector of the Parish of Saints Cyril and Methodius church; and Laymen Dr. Edward S. Murray and Math Ferlic.

The ladies of the East Fox Lake (Ill.)

A new cemetery has been opened by W. H. Riffin and G. W. Bevard at Carterville, Ill. It will be known as Hillcrest Cemetery.

The Catholic Cemetery Association, of Jacksonville, Fla., is planning to make some much needed improvements and repairs in the old cemetery on Cordova street. Among the improvements will be the erection of a new fence and a general clearing up and beautification of the cemetery.

The old board fence around the Prairie City Cemetery, of Prairie City, Ill., will soon be replaced by an iron fence.

The Cemetery Board of Woodlawn Cemetery, Tampa, Fla., will ask for enough money to construct a stone retaining wall on the south side of this cemetery.

The Scandinavian Cemetery Association, of Rockford, Ill., is commencing improvements in this cemetery. The drives and walks will all be paved with brick.

The Parkview Cemetery Association, of Farmington, Mo., was recently incorporated by M. C. Spaugh, L. H. Williams and W. N. Fleming.

The Woman's Auxiliary Cemetery Association was recently organized by the women of Brenham, Tex.

Park Lawn Cemetery, of Waco, Tex., was recently incorporated. The ground is being laid out by a landscape architect and the cemetery will have every modern improvement. A proportion of the funds from the sale of every lot will be set aside and placed in a trust company for the perpetual care of the grounds.

The arrangements of the joint committee from the Council and Board of Trustees for the purchase of $2\frac{3}{4}$ acres of land for cemetery purposes were approved at a joint meeting of the two boards at Mt. Gilead, O., recently. The consideration for the land is \$1,650. The transaction will not be finally closed, however, until legal questions are decided.

Having received authority from the local water company to proceed with the installation of a system of waterworks in the cemetery, the San Benito Cemetery Association, of San Benito, Tex., plans the sodding of all the grounds under its control with Bermuda grass. Steps will be taken to see that the ground so sodded will be kept in good shape.

The fence around the Hico Cemetery, of Alworth, Tex., has just been completed at a cost of \$1,700. It was built through the combined efforts of the Hico Cemetery Association, Ladies' Auxiliary and the citizens of that city. Barmore & Himmell, of Cameron, were the contractors.

Work was commenced recently on the reconstruction of Ridgelawn Cemetery, of Elyria, O. William Warnen was appointed superintendent of this cemetery a short time ago.

Repairs are being made in the city cemetery at Freeport, Ill. The lots will be



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cared for and the grounds placed in fine condition. At a recent meeting of the council a resolution was presented for the construction of a fence around the cemetery.

MORE OR LESS PERSONAL.

At a recent meeting of the Hamilton Cemetery Guild, of Hamilton, Ill., the following officers were elected: Mrs. Alice Watson, president; Mrs. Roy Frederick, secretary; Mrs. Abbie Tyrrell, treasurer.

The directors of the Calvary Cemetery Association, of Dayton, O., have elected John H. Finke secretary for the thirty-third time. The other officers elected for the year were: Rev. William D. Hickey, president; John F. Jeckering, treasurer, and Charles Kobus, superintendent.

T. Glenn Phillips, landscape architect and member of the American Society of Landscape Architects and Detroit City Plan and Improvement Commission, announces the removal of his offices from 26 Broadway to 1601-2 Kresge building, corner Adams avenue and Park street, Detroit, Mich.

Sidney Herbert Hare, junior member of the firm of Hare & Hare, the well-known landscape architects of Kansas City, Mo., was married July 11 to Aurel May Murtey, daughter of Mrs. Eva Worrell Murtey, of Lincoln, Neb.

THE COVER ILLUSTRATION.

The illustration on front cover of this issue shows a very attractive and substantial design of iron fence suitable for cemetery, park or playground which is worthy of comment. It is a special ornamental design made by The Stewart Iron Works Co., Cincinnati, O., on which this well-known firm is enjoying an exceptionally good trade. While it can be made any height and of different sizes of material, the specifications are usually as follows:

Height when set, 6 feet 6 inches; constructed of $\frac{7}{8}$ -inch square pickets, with large ornamental wrought malleable picket heads. Top rail is 2x2-inch heavy box channel; bottom rail, 2x $\frac{3}{8}$ -inch Stewart's patent 3-rib steel channel; ring ornaments are $\frac{7}{8}$ x $\frac{3}{4}$ -inch, securely riveted to pickets. Line posts are $\frac{7}{8}$ -inch square, with heavy malleable base, and have $\frac{7}{8}$ -inch square braces. The ornamental flat newell post shown in photograph, which is used at end of each 8-foot panel, is a striking feature of the fence. This post is built up of 2x1-inch side bars, with $\frac{7}{8}$ -inch square pickets and interior scroll work of $\frac{7}{8}$ x $\frac{3}{4}$ -inch material. Scroll work above top rail is 1 $\frac{1}{2}$ x $\frac{3}{4}$ -inch material. This post is substantially braced with heavy "Y" braces.

It can be seen from a close observation of the photograph that, taken as a whole, the fence is a very desirable pattern. The Stewart Iron Works Co. will be glad to furnish those interested with drawing and full particulars regarding this style of fence.



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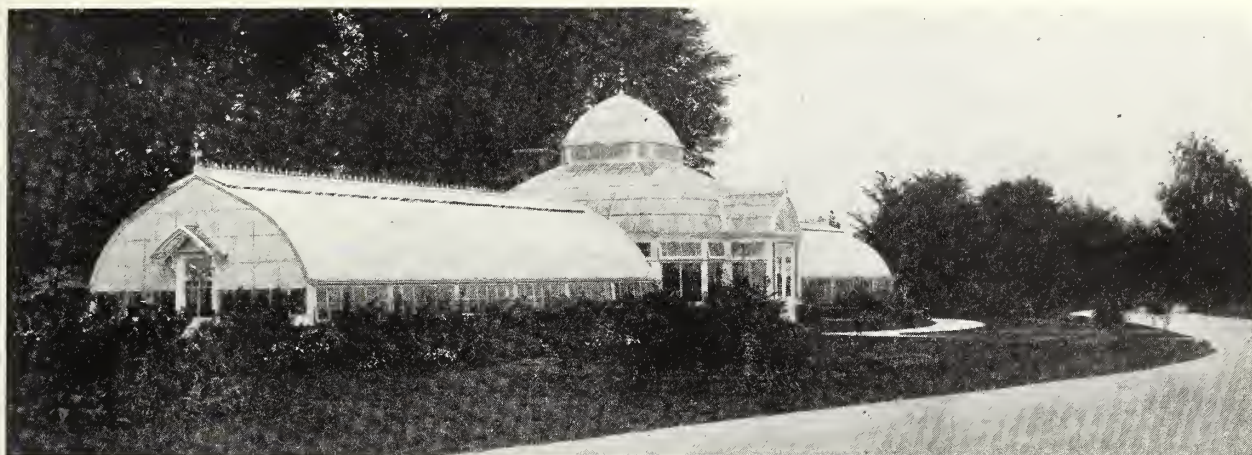
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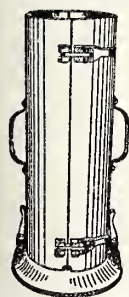
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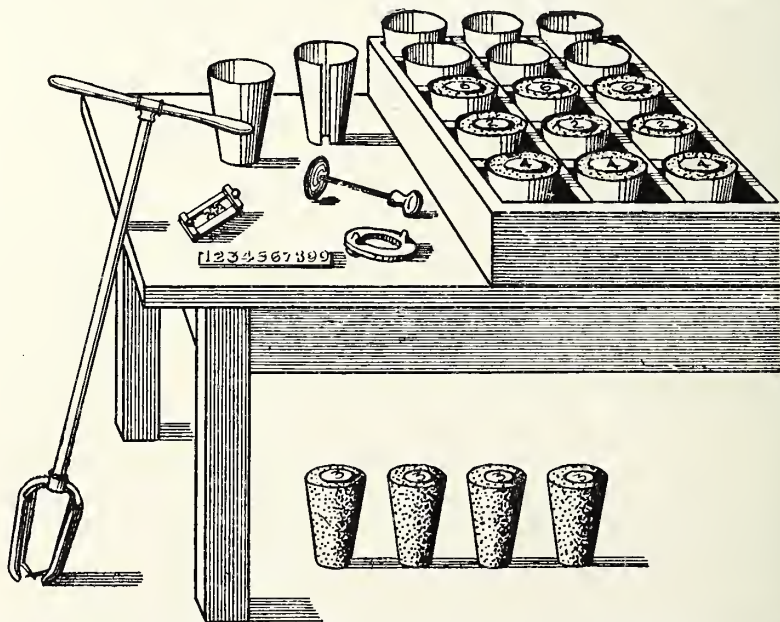
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CEMETERY NOTES.

Continued from page 244

Owners of lots in the city cemetery of Shreveport, La., are urged by Commissioner John McCullough, of the Department of Public Utilities, to cut the grass and otherwise improve the appearance of lots that have been neglected. He calls attention to a city ordinance adopted in 1907 making it a violation of the law to allow an unsightly appearance of cemetery lots and providing a fine ranging from \$10 to \$25 for violation.

A report of an audit made of the affairs of the Oak Ridge Cemetery, Springfield, Ill., by the Chicago auditing firm of Shephard & Chandler, filed with Mayor Schnepf, criticises the bookkeeping system of the board and points out that the expenses for the fiscal year ending February 28, 1914, exceeded the receipts by \$4,166.87. The total receipts for the fiscal year were \$19,931.09 and the expenses \$23,079.96. The report points out that the board had no right to expend money belonging to the cemetery board in advance of the receipts or incur any debts on account of the cemetery without the consent of the city council. In their report the auditing company declare that their men were unable to find the origin of a fund amounting to \$16,731.52, which was called "Surplus, March 1, 1913." In the perpetual lot owners' fund the report finds that the income ex-

ceeds the expenses by \$306.05 and that the surplus has been carried to the investment fund to be used in part for the purchase of new investments for the account of the general investment funds. The city commission, in session with the Oak Ridge Cemetery Board, later absolved the board of any neglect or indiscretion in the conduct of its affairs, and instructed Commissioner Payton to request Shepherd & Chandler, of Chicago, to correct some of its statements. The cemetery board submitted to the council a written summary of its affairs and its methods of doing business, from which we quote as follows:

1. While admitting that the expenditures during the last fiscal year exceeded the income, we deny that any law or rule was violated.

It is not uncommon in any business that in some years no profit is made; sometimes even losses are sustained. During the fiscal year ending February 28, 1914, the accounts of which are under consideration, improvements were made such as building cement gutters; rebuilding a sewer, which had caved in, at considerable expense; also buying additional ground for cemetery purposes; besides buying back a number of lots, all of which caused the expenditure to exceed the income during this period, while on the other hand, the sale of lots and other income were less than usual.

But we emphatically deny all this difference was made good from any surplus. At no time in the history of Oak Ridge cemetery was there any fund which was denominated a "surplus." The amount on hand at the close of each fiscal year was always treated as "balance on hand" and were the savings of former years.

Furthermore, we desire to say that the board never exceeded its powers as provided by ordinance

in creating a debt without having sufficient funds on hand to meet all obligations.

2. The comments made by the auditors as to the management of the Lot Owners' Perpetual Care and Improvement fund are not at all justified, as the conclusions arrived at are based on the wrong premises.

One of the criticisms of the auditors was that a special fund should have been created for the excess of revenue over the expenses for care of these lots.

An ordinance is quoted by the auditors of the year 1902, which has not been in force since 1908, when a new ordinance was passed by the city council providing for the management of this special fund.

As provided by this ordinance all funds are kept collectively and invested in such securities as stipulated in said ordinance; no provision is made therein to create a special fund from the excess of revenue over the expenses; and we see no reason why a special sinking fund should be created, when in fact the lot owners perpetual care and improvement fund in its entirety is a sinking fund, which is not expected to be withdrawn. Only the income can be used for the care of the respective lots.

As to the manner of keeping the accounts and records of this fund, we desire to say that a regular record book is kept in the office of the city clerk, wherein the deposit of each and every donor is properly recorded, and at the end of each fiscal year the expenses of the respective lots are charged against the account of such lots, thus showing every year how much money was expended on each and every lot.

In addition to this record a regular cash book is kept by the president in which the collective receipts and disbursements of this fund are properly entered.

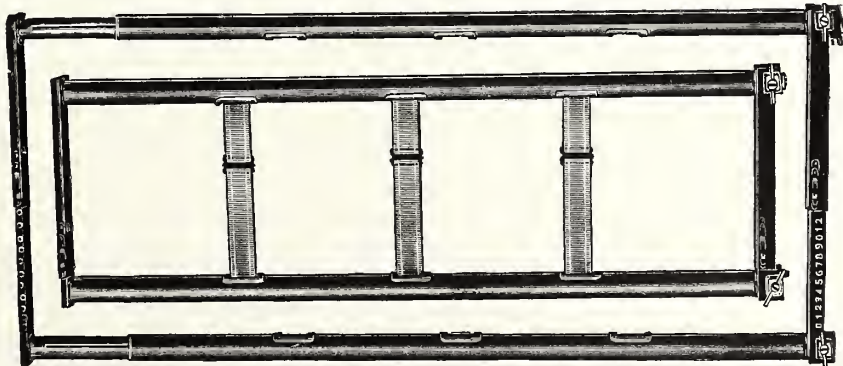
In this connection we may be permitted, and pardoned to mention that the general fund of the cemetery has increased in the past five years from \$6,799.46 to \$15,956.19, besides having expended large sums of money for additional lands purchased and extensive improvements made during this period all of which was paid for when acquired or when such improvements were finished and accepted by the board.

Respectfully submitted, B. A. Lange, President; James W. Patton; Howard K. Weber; Jos. P. Lindley, August Striffler.

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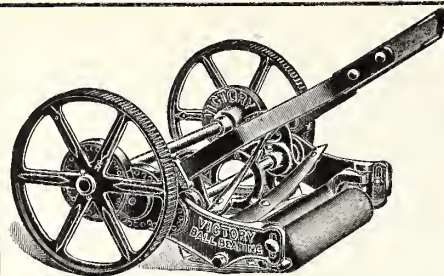
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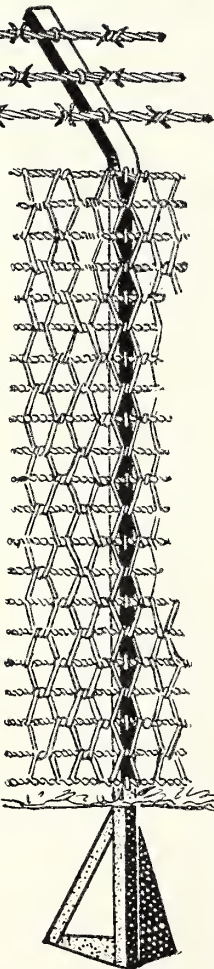
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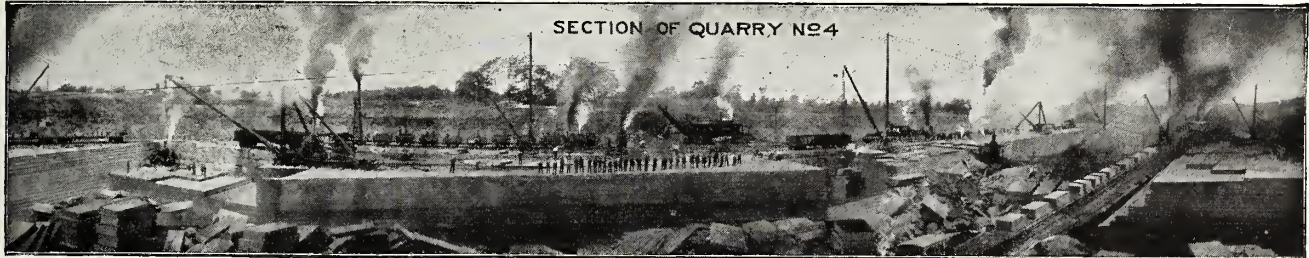
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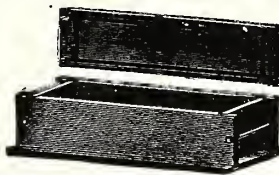
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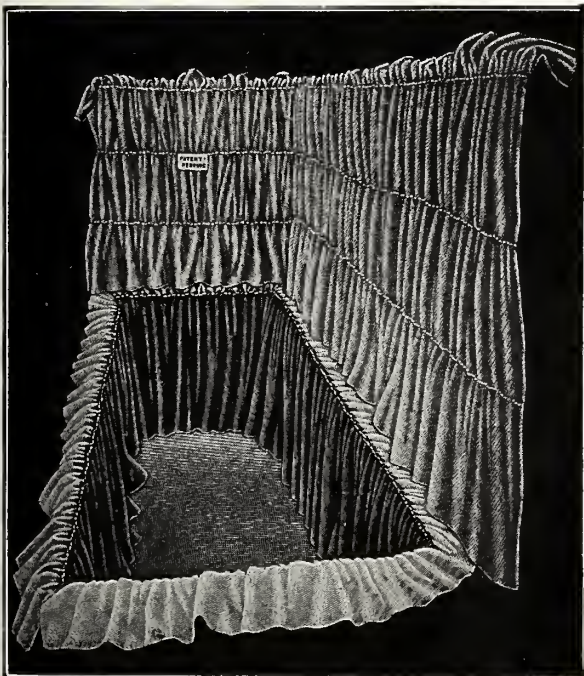
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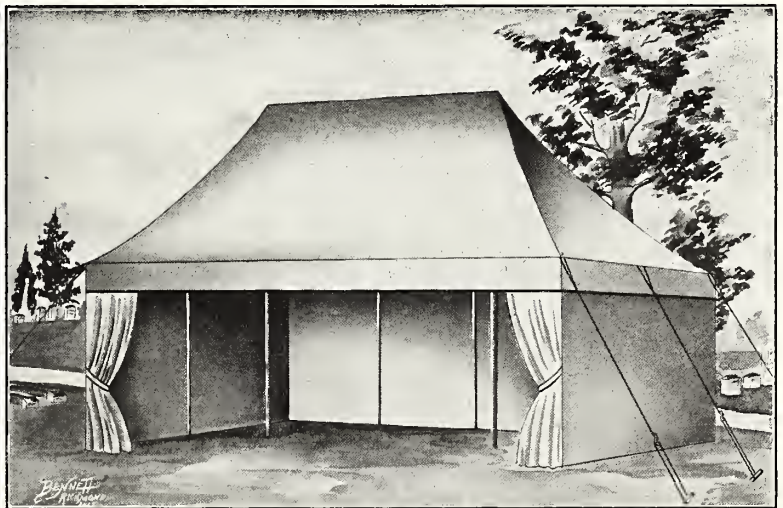
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Vol. XXIV., No. 8

OCTOBER, 1914

CEMETERY CONVENTION NUMBER

Report of A. A. C. S. Convention in St. Louis—The Modern Cemeteries of
St. Louis—Preservation of Natural Park Woodlands—Monuments and Other
Memorials by James Currie—Ground Covering in the Cemetery by O. C. Simonds

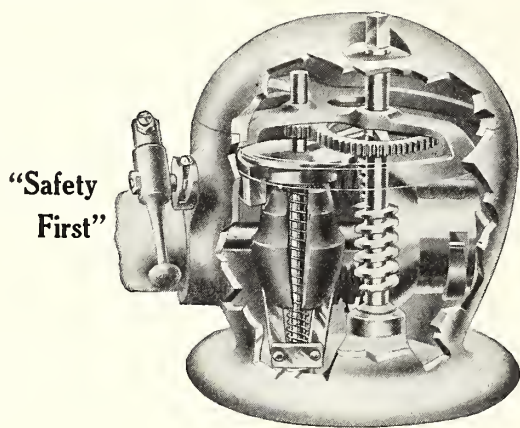


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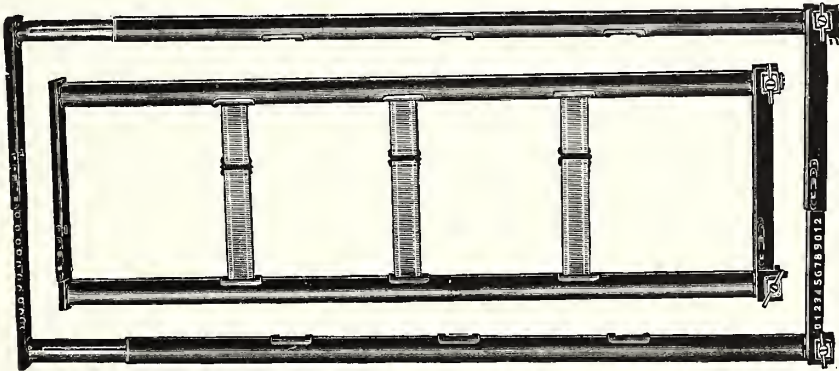
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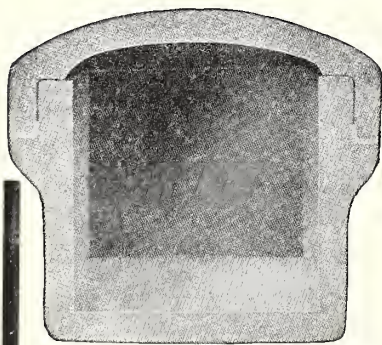
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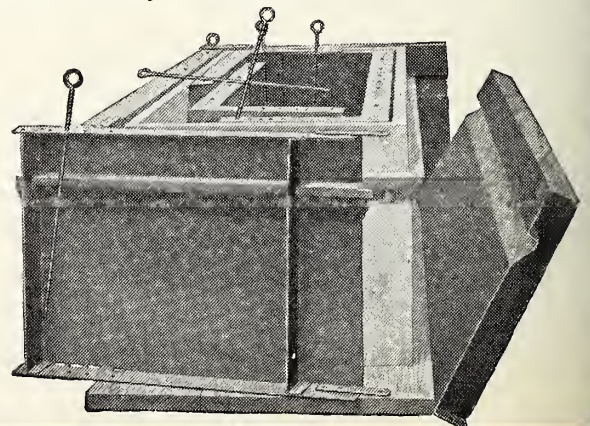
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EDITORIAL

OCTOBER, 1914

VOL. XXIV No. 8

Progress in Modern Cemetery Development

Probably no more complete summary of the wide variety of problems that confront the modern cemetery superintendent could be found than the mere list of the subjects discussed at the recent very successful convention of the Association of American Cemetery Superintendents reported in detail elsewhere in this issue. These were the subjects formally treated in able papers and informally discussed in the light of the practical experience of the members present: "Monuments and Other Memorials"; "Brains and Muscle Wanted"; "More About Mausoleums"; "The Cemetery and the Monument Man"; "Concrete Enclosures"; "A Few Hints on Old-Fashioned Flowers"; "Care of Lots and Monuments"; "Ground Covering"; "Calvary Cemetery: Its Features"; "Flower Displays Without Rain"; "Pictures in a Park Cemetery." The improvement of the cemetery landscape and the better harmonizing of the park effects with the monuments and other

structures that find a necessary place in the cemetery is at present the most pressing problem that confronts the modern cemetery. The improvement of monumental design and the planting of the grounds to properly set off the monumental structures are subjects that are assuming growing importance in the management of the cemetery, and rightly held an important place in the discussions at St. Louis. Development of a cemetery is probably the most difficult problem in landscape art by reason of the many artificial and utilitarian conditions that are necessarily imposed. The most expeditious conduct of the cemetery's chief business, that of interring the dead, must be provided for and at the same time the maximum beauty of park landscape secured. The progress that is being made in this direction is admirably portrayed in the matter pertaining to the A. A. C. S. convention printed in this issue.

Park Problems of the Future

The recent convention of the American Association of Park Superintendents, reported in detail in our September issue, called forcible attention in its addresses and discussions to the most pressing practical problems of park management and development. Without question, the most important aspect of modern park building in the past ten years has been the increasing variety of service given to the people. The dominant effort has been to get the people to make the widest possible use of their parks, and this effort has led to the extension of park service to include activities that were unheard of in our earlier park systems. The task of giving this increased service without marring the landscape attractions of the parks has been the highest attainment of

modern park development. To summarize the best park thought of today it might be stated that the two most important problems of park development today are the surfacing of roads and playgrounds, and the preservation of natural woodlands and plant life under modern city park conditions. The address of retiring President Richards, printed in our last issue, is devoted to the best thought and experimental work on the subject of playground and road surfacing, and that of Oglesby Paul, in this issue, discusses practical developments in the preservation of natural woodlands in one of our greatest city parks. These two addresses point the way to park progress of the future, and are guides for future work as well as indications of the accomplishments of this useful park organization.

Editorial Notes

A proposition contemplating the establishment of a new cemetery on "The Hill," at Atlanta, Ga., in which also should be located a \$100,000 mausoleum, was recently presented to the City Council of Atlanta. The proposition was in the form of a petition signed by W. S. Brand, who owns property on "The Hill" suitable for such a purpose, and Clark Grier, who represents the Georgia Mausoleum Company.

Residents of Wallace, Idaho, now claim that results of the disastrous forest fires in northern Idaho in 1910 are being made evident in the changed flow from a watershed then burned over, which furnishes the water supply of the city. This basin included an area of approximately 2,000 acres and was formerly well timbered with trees from 50 to 200 years old. These were almost wholly destroyed by the fires of 1910. It is stated that before the fires the flow of the stream at its lowest stages was never below 1,000 miners' inches, the unit of measurement which has been used. But since the fire the records show that the minimum flow has fallen to about 250 miners' inches.

Exhaustive inquiry has established the fact that lightning ranks next to railroads as a source of forest fires. Forest officers say that the increasing care with fire on the part of the railroads and the public generally tends to make lightning the largest single contributing cause. This statement represents a change of view from that held less than a decade ago in this country, when forest journals gravely argued whether lightning caused forest fires, though it was known that trees were the objects most often

struck. Trees are said to be oftenest struck simply because they are so numerous, and, extending upward, they shorten the distance between the ground and the clouds; further, their branches in the air and roots well into the earth invite electrical discharges.

Almost every conceivable use to which land may be put is represented in the permits reported by the forest service for special projects on the national forests. Some of the uses shown range alphabetically from apiary through brickyard, cannery, cemetery, church, cranberry marsh, fox ranch, marine railway, rifle range and turpentine still to wharf and whaling station. There are 15,000 permits in force for such special uses, which are distributed geographically from Alaska to the Mexican line and east to Florida.

Striking facts regarding our forest resources, their value and their waste, are condensed in an eight-page illustrated circular of the American Forestry Association, just issued. The lumber industry is said to employ 735,000 people, to whom are paid annually \$367,000,000 in wages, the worth of products being \$1,250,000,000. The forests of the country cover 550,000,000 acres. An average of seventy human lives are sacrificed annually in forest fires, says the circular, and a loss occurs of \$25,000,000. Damage from insects and tree diseases, which follow fire, costs each year \$50,000,000.

Nearly 4,000 acres were reforested in Montana and northern Idaho during 1913 at an average cost of \$7.50 an acre.

PRESERVATION OF NATURAL PARK WOODLANDS

An address before the New York Convention of the American Association of Park Superintendents, by Oglesby Paul, Landscape Gardener, Fairmount Park, Philadelphia.

As this subject is an unusually broad one, I have limited my paper and its illustrations to work in the parks under our commissioners, and in the discussion following it will rely on the members of other cities to round out the subject of describing their problems where they differ from ours. Our parks include some 5,000 acres, and vary in size from 20 to about 3,000 acres each. Nearly all of them contain natural woodlands. As you know, we are located in a great manufacturing city, with a dense population, and a soot and gas-laden atmosphere unfavorable to tree growth.

Realizing the handicaps under which our trees were suffering, and finding the city fathers of the opinion that as Nature had planted these forests she would provide for them, I decided to undertake an investigation of the forest conditions and obtain definite figures to prove all facts discovered. To this end I began about ten years ago to record the conditions and changes in our woodlands.

First a census was made of each woodland, enumerating the number, kind and size of the trees composing it, the presence or absence of undergrowth, and its nature and density if present, the thickness of humus or leaf mold, the character of soil and sub-soil with its moisture contents, and the slope of the ground.

By this means the forest conditions at the time were definitely recorded. Our forster was then directed to keep a journal, recording all trees removed or topped, with the cause, where discernible, of their decline, such as insects, fungi, drought, storm, etc. A series of tests was also carried on of methods of combating the destructive insects or fungi attacking the various trees. We drew on all available sources for advice, including the experiment stations in half a dozen states, the United States government and the professional tree doctors, and then tested their advice on marked trees. No tree doctor was refused a hearing because of the fantastic claims for his patent nostrum. As we were to be our own critics, nothing was to be taken for granted; everything must stand the acid test. We have thus assisted at mysterious chestnut tree inoculations with the aid of augers and ill-smelling solutions, and have plugged borer infested hickories with pounds of putty and quarts of bisulphate.

By 1907 we had gained clear appreciation of a rapid deterioration occurring in these woodlands and in a pamphlet were able to show this to the public with convincing and mathematical proofs. In some cases the wooded areas were actually shrinking by the failure of the old trees and absence of young ones; in others the more valuable and long lived trees were dying and their places being taken by



TRAIL THROUGH HEMLOCK FOREST OF WISSAHICKON RAVINE. A Beautiful Ramble and a Fire Guard Combined.

short lived and weedy species, thus causing a decided loss in beauty and an increase in the cost of maintenance. Where the location was exposed, the stand open and the undergrowth and humus thin, the shrinkage was most severe.

Insects and fungus diseases were exacting a heavy toll and completing the destructive effects of trampling by the public and the poisoning of gases from innumerable chimneys. The situation was an alarming one. Indeed, as I thought sometimes of that invading host of elm beetles, oyster shell and San Jose scales, Tussock and Gypsy moths, aphids and chestnut blight, which had already come over seas to harass our native trees, their future looked dark indeed. Were our beautiful native trees to disappear like the Esquimaux, Carib, Aztec and Indian, before the invading Europeans? But the fates have been kind to us. Not all our trees have been attacked by plagues as deadly as the chestnut blight, and the Leopard and Gypsy moths have not gained lodgment with us. Our aroused public opinion has now brought increased appropriations, so we are starting these woodlands on the upward path again.

To dismiss the subject of insect destruction, I might say we have found no panacea, but use home-made solutions strong enough to kill every insect reached, thus minimizing the labor item, so impor-

tant on this large work. For all scale insects pure crude oil spraying has given the best results, even annihilating the deadly golden oak scale, which fairly thrived on other preparations. For oyster shell scale it has proved the best business proposition owing to the difficulty of covering the trees effectually with other solutions used at the hatching periods. Let no one treat lightly this familiar garden plague, for once established it may wreck the growth on an entire mountain side, as I have seen near Lake George. A strong arsenate of lead solution has proved deadly to all caterpillars, so that while thousands of our trees were defoliated a decade ago by Tussock moth alone, we had but one reported attack on a few trees near the edge of a park this year. We have found it good economy, having cleared our own territory, to establish a protective zone several hundred feet deep about a park by banding the trees with tanglefoot.

We found that while stag heading or gradual dying back of old forest trees may often be postponed indefinitely by severe topping, the work should be done before the limbs begin to fall. If delayed until the top began to die, the pruning seldom restored the tree, which usually had to be removed after successive operations. The oaks responded particularly well to topping if done as a precautionary measure. Bracing weakened limbs, cleaning out cavities, and covering exposed wounds with tar or other preservations are permanently helpful if inspected regularly and additional preservatives applied from time to time.

The filling with concrete of deep cavities is necessary where the openings are near the ground, if only to prevent firing of the trees by mischievous boys rambling in the woods. Owing to their costliness and the difficulty of obtaining a sufficiently flexible combination of steel and concrete to stand the swaying in violent storms of even large trees, these fillings have too many disadvantages to be regarded as important factors in woodland preservation. A striking demonstration of this occurred last summer when a violent wind storm wrecked hundreds of old trees, including many which had been carefully filled with concrete, while the damage among the younger trees was trifling. Owing to the very complicated processes which occur in forest soils, we are at a disadvantage in feeding old forest trees, though dressings with top soil have proved beneficial on the eroded surfaces. Summing up the situation, the preservation of the woodland is chiefly dependent on the development of the vigorous younger growths.

As we have been compelled to remove thousands of diseased chestnuts, borer in-

fested hickories and old dying trees, the disposal of the wood has been important. Straight chestnut poles are readily disposed of on the stump at a small profit. The other trees to be removed are felled by our corps and worked up into lumber or cordwood. We have established a lumber yard near our shops, where the run of the portable mill is hauled, graded and stacked for seasoning. Though our cut last year was over a quarter million of board feet, we shall use it all ourselves, as we have a steady demand for lumber, owing to the large number of historic mansions, museums, greenhouses and other buildings in our park system. The cordwood is given to the poor for the hauling, either directly by permit on request or through the medium of various missions who maintain cordwood and kindling yards. Its marketable value with us is slight, and I believe no use can be made of it more in harmony with the park idea. The cleared areas are replanted as rapidly as possible with young trees placed in every opening. Red, black and scarlet oaks, tulips, white and green ash, sugar maple and white pine are the most commonly used upland trees, with hemlock, pin oak, cucumber and sweet gum for more sheltered spots.

Where excessive dryness is the clearly indicated trouble, as in the case of high open woods on dry plateaus, marked improvement of the remaining trees has resulted by bringing the forest roof down to the ground at the edges of the woodland by a fringe of shrubbery and low trees. The drying winds are thus cut off, and the diagonal rays of morning and evening sunlight are prevented from reaching and drying out the forest floor, which is often sufficiently protected from the vertical rays, even in a failing woodland. The artistic effect of such planting is also very satisfying, the forest meeting the turf in a great billow of luxuriant foliage with an



IN THE HEART OF THE WISSAHICKON VALLEY WITH ITS TURBULENT MOUNTAIN STREAM.

infinite variety of leaf form and flower, thrown against the noblest of backgrounds. Our native shrubbery, such as *Rhus copallina*, the *Viburnums*, *Sambucus*, *Cornus* and the like are admirably suited for this work.

A second or lower tier of foliage in the woodland itself is natural to our hardwood forests, and where practical we try to restore it by planting such shade-enduring, slow-growing trees as the beech, dogwood, hornbeam, *cercis*, *moosewood* and *hemlock*. These smaller woodlands are often too valuable for picnickers for us to extend such dense plantings far into the heart of the wood, and where the ground is reasonably level this is unnecessary.

To prevent the invasion of inferior spe-

cies is a constant struggle, as the seeds of *alanthus*, *catalpa*, *fire-cherry* and *poplar* seem ubiquitous. The ability of some undesirable trees to reach and fill every forest opening is amazing. Robert Douglass, I remember, reported that to his certain knowledge the cones of a scrub pine had hung closed for fifteen years until the heat of a forest fire opened them and released the seeds to take possession of the burnt-over area.

On steep, exposed hillsides a more vigorous policy has proved necessary to secure results. As the growth begins to fail on these slopes, which are particularly difficult to keep well forested, the ground becomes rapidly exposed to sun and winds, as the falling leaves are blown away before they decay, thus robbing the soil of both mulch and fertilizer, and exposing the bare earth to the action of driving rains and passing feet. I never realized the full significance of this impact of violent rain storms on bare grounds until I accidentally fell while botanizing on the Isthmus of Panama, where the rainfalls are extraordinarily heavy. Though the soil was fertile alluvium, free from stones, and contained sufficient moisture from the last downpour to be still of a deep chocolate color, the surface had become so hard I felt as though I had fallen on a ledge of rock. Kept well covered with thrifty trees, undergrowth and spongy leaf mould, steep hillsides give little trouble, but once let the cover grow thin (incessant attention alone will prevent it in our soot-laden atmosphere) and an accumulating series of disasters is ahead. Against windfalls which so frequently uncover these slopes, the prompt removal of



LUMBERING IN FAILING WOODLAND, PREPARATORY TO REPLANTING.

dangerous trees is the only safeguard. It is now a part of the regular routine of our guard to report such trees, and after verification the forester at once removes them. Indeed, before replanting an insufficiently covered forest hillside we have found it saved later disasters to remove or top even slightly dangerous trees as a safeguard against windfalls. As improvement in the water supply, mechanical condition and fertility of the soil is of vital importance, we dynamite the holes to loosen the sub-soil, use bonemeal and manure liberally, and make V-shaped depressions about the trees when planting, to catch the rain as it runs off the slopes. Where planting is done in the autumn, we reverse this last process, hilling up the ground some fifteen inches high above the trunk. By this means the trees are kept firm without staking and the frost action minimized. The following spring the ground is leveled and the depression formed. We have greatly decreased our percentage of loss in planting hardwoods in the autumn by this method.

As the public has an inherent love of climbing up and down these steep slopes, we try to meet this need by numerous trails

up and down them, formed by rough flights of steps made of split logs five to six feet long, pinned in place and filled behind with earth or cinders to form the treads. As the wood is at hand the cost is trifling and the length of life surprising. We then fill in with undergrowth close to the trails. In our planting we rely largely on stock from our own nursery and plant a variety of sizes to avoid cropping the woods in an unnatural manner. Aside from the European beech, which we use in preference to the native species, owing to its greater resistance to the aphids, our native trees have given best results, all things considered.

In the vicinity of railroads and in the large forest area of the Wissahickon the fire problem is a serious one. So numerous were the fires and so serious was the damage that a mounted guard now patrols during the danger periods the smaller woodlands which line the railroad yards. A system of fire trails, which serves also as bridle paths, has been established in the Wissahickon section, with its hundreds of acres of unbroken forests, and a force of twelve forest rangers created to guard it

and the other large outlining forest areas. Two small chemical engines are also maintained in the heart of the forest to check more serious conflagrations. Our rangers, while under the direction of the officers of the park guard with their admirable system of military discipline, are not uniformed and are required in addition to patrolling and fire-fighting to perform such minor forest work as removing windfalls and clearing the trails.

To preserve natural woodlands under city conditions is a costly and difficult work, perhaps the most difficult of all park maintenance, and our funds are far too small to handle the situation properly. But interest in it is steadily growing and spreading to all departments of the city government, so that now we find the city engineers deflecting streets and sewers to save forest growths on areas likely to be acquired for park purposes. No artificial park landscape, even though planned by a forester hand, has ever approached the noble dignity and infinitely satisfying loveliness of our Eastern forests, and surely none of these is fairer than our Wissahickon, so we feel they are worth all and more than they cost to preserve.

MONUMENTS AND OTHER MEMORIALS

An address before the Convention of the Association of American Cemetery Superintendents at St. Louis, October 6, by James Currie, Superintendent, Forest Home Cemetery, Milwaukee, Wisconsin.

In response to the kind invitation of our esteemed friend, the president of our association, to speak to you at this time on some subject of my choosing, I decided to supplement the address I was then preparing for the convention of the National Retail Monument Dealers' Association held in Milwaukee August 17 to 20. The subject assigned to me on that occasion, "The Monument and Its Surroundings," afforded me an opportunity of appealing to monument dealers for their co-operation towards the improvement of monumental architecture, more particularly in its relation to the landscape of the cemetery.

While admonishing them to observe the principles involved and use the influence of their profession in efforts to assist their clients in the selection of suitable memorials, I was deeply conscious of the fact that the present deplorable condition of many of our cemeteries with respect to the number and character of monumental structures which so obtrusively mar the landscape and offend our sense of beauty is chargeable in large measure to the management of cemeteries, who because of indifference or hopelessness accepted a situation which appeared and unalterably associated with conditions in the cemetery, seemingly precluding any material improvement. I think we will concede that if cemetery officials had been more impressed with landscape beauty and had cultivated a better understanding and higher appreciation of monumental art and its relation to

environment and had endeavored to interest lot owners in its principles, we would today have fewer overcrowded and dilapidated cemeteries.

Impressed as I have been for many years with the responsibility resting on the management of the cemetery in this connection, I was prompted to adopt this theme for my address, not unmindful, however, of the fact that the monument has furnished a topic for consideration and discussion at several conventions of our association, but in the hope that I may be able to submit some thoughts from an angle perhaps new and helpful to some of my hearers to warrant a recurrence to a subject with which so many of you are already quite familiar and perhaps no longer harassed by the problems it presents.

To distinguish between the two terms expressed in the title of my subject, which are in a sense synonymous, I wish to explain that I use the term monument in reference to a structure dedicated to the family and usually more pretentious in size, style and beauty than the more simple and less obtrusive memorial erected at an individual grave.

Many of our best authorities on cemetery planning find it difficult to harmonize monumental structures with their conception of the ideal cemetery, which they visualize as a park-like enclosure dedicated to the dead for a final sleeping place as the name implies, so beautiful, quiet and restful in its aspect as to afford not only

comfort and consolation to the bereaved, but a certain degree of pleasurable anticipation to all who contemplate the hour when they, too, shall join the great majority.

In the opinion of advocates of the ideal cemetery, Nature must reign supreme, and no discordant feature, such as monuments or other artificial structures, must be suffered to invade its precincts. The simplicity, beauty, dignity, permanency and economy suggested in the plan is worthy of our most serious consideration. How to attain or approximate this ideal in view of prevailing opinions and present-day cemetery requirements is the problem confronting the management of every cemetery in the country.

Beautiful scenery in the cemetery is wonderfully appealing and helpful. It diverts the mind and tends to dispel the shadows of death and alleviate sorrow and despair. It is conducive to pleasure and promotes cheerfulness, inspiration and happiness.

Appreciating in the highest degree the sylvan beauty and restful quiet the ideal cemetery would afford, and deploring the stone-yard aspect of cemeteries in general, I could wish with all my heart that the simplicity and beauty of the ideal could be consistently created and maintained, but appreciating that laudable sentiment permeating and animating the human mind which finds expression in the time-honored custom of erecting monuments and tombstones and beautifying the graves of the

dead, I many years ago accepted the situation and learned to recognize as inviolable the sacred purposes of the cemetery and in reasonable degree to sympathize with those who find consolation in the memorials they erect.

To eliminate the monument entirely appears to be impracticable in the present age. In no cemetery that I know of has the management had the courage or deemed it expedient to arbitrarily exclude all monumental structures except perhaps from certain sections of the grounds. In fact, I believe the prevailing opinion among cemetery officials is not in accord with a policy which would ignore that delicate and beautiful sentiment implanted by nature in the human heart which prompts us to mark the resting place of some loved one or symbolically give expression to the esteem and love in which the departed one is held by surviving relatives or friends in the erection of a monument or memorial at his grave.

A monument, if artistically designed and skillfully executed, becomes a work of art and is always interesting and appealing to one's sense of beauty and appreciation of the handiwork of man. Erected as a memorial it is doubly interesting and instructive if the artist has intelligently conceived and clearly indicated the sentiments he has endeavored to portray in perhaps paying tribute to some distinguished citizen, or in giving expression to a mother's love for her lost child whose memory she would cherish in fitting memorial of stone. The one may be designed for the park or public square, the other to take its place in the cemetery. Either one, if given a proper location and artistic setting in the park or cemetery, may be so harmoniously adapted to its environment as to be regarded as a component part of the general scheme, perhaps enhancing the beauty of the landscape and creating the impression that without it the scene would be incomplete. If, then, we could curtail the number of monuments and memorials within reasonable limitations and could select such styles and sizes as were best adapted for their respective locations, whether in groups or as isolated features, with appropriate settings and embellishments of trees, shrubs and even vines clinging to rock-like forms in the more picturesque situations, and on the other hand could we without undue opposition eliminate all structures we might consider superfluous and all inferior designs, reducing in size and height, preferably flush with the surface of the ground, all plain markers or index stones and corner posts, exercising the utmost care in supervising material and workmanship to insure durability, would we not be approaching the ideal with consistency and reasonable success?

Within the past twenty-five years a wonderful change of sentiment has taken place in this direction. At one time it was a universal custom for lot owners to place a

monument of some kind on their lots. To that extent did this custom prevail that, for example, in the event of the death of a husband it appeared to be the duty of his widow to erect a monument to his memory with as little delay as possible. Failing to do this, she might expect to be subject to criticism or even censure on the part of her relatives or friends. In many instances this was a real hardship on the bereaved, as frequently a very large part of the small savings of the husband was expended in the purchase of a monument. This custom, practiced with little or no opposition on the part of the cemetery authorities, resulted in the greatly overcrowded portions of cemeteries to be seen everywhere, with their heterogeneous assortment of monuments and tombstones, creating the stone-yard effect so frequently and aptly referred to. With the development of new ideas, lot owners gained courage in the exercise of their own opinions, and are now no longer slaves to custom or worried by what the world may say or think.

While it is true many lot owners still assume the right to erect a monument on their lots, and that, too, of their own choosing, it is nevertheless a fact, judging from our experience in Forest Home, that a large number, constituting, I believe, a majority of all who acquire lots, are pronounced in their opposition to monuments or indifferent to such structures and are easily persuaded to forego the privilege of erecting anything more than a very simple, unobtrusive individual marker.

The higher motive which inspires the erection of a monument being the desire to give fitting expression to sentiments of reverence, affection and esteem, it follows that memorials should be indicative of purpose, expressive of personal selection and taste, beautiful in style and symmetry, and, above all things, appropriate to location and in harmony with environment. Simplicity of form and unity of style are always commendable, but ornate designs, if artistically conceived and intelligently decorated, may be more expressive of charm and beauty. The desire to produce something unique and create new and attractive fashions has encouraged designers to give unbridled rein to their fancy, resulting in forms which utterly disregard and violate the well understood principles of monumental architecture. In general the creations of this new fad which have appealed beyond understanding to many of our lot owners are travesties on true art, exposing the purchasers to charges of bad taste and ignorance of the fundamentals of artistic expression. These curios, usually comprising in their composition imitations of nature and art and representations of symbolic forms and allegoric figures, often jumbled together in one structure, only display poverty of design and are generally ludicrous. Needless to say they should be excluded from all cemeteries making any pretensions to beauty.

With reference to location, a monument may be pleasing or discordant, according to whether or not it is suited to the lot it occupies, is essentially different, but in harmony with other monuments in proximity and satisfying in relation to the surrounding landscape. The landscape in art, as you are all aware, is divided into two distinct classes, the Beautiful and the Picturesque. For the Beautiful, with its sweeps of level lawn and gently undulating slopes, classic monuments and chaste memorials are admirably adapted. The Picturesque, with its rugged, irregular and abrupt lines, suggests Gothic forms. Here plain rock-faced structures or boulder monuments, so popular with some people, may also be successfully introduced; but we should shun all forms of decoration frequently attempted on rock-like designs. A plain, unassuming design may be dignified and suggestive of repose if adapted to location, but a much more pretentious and perhaps more beautiful structure may prove unsatisfactory because of its dominating, discordant effect. These considerations test the creative genius of the designer, the judgment of the cemetery authorities and disposition of the lot owner.

In my address to the monument dealers I offered suggestions relative to the styles of monuments best adapted to certain locations and for landscape effect; for example, low designs for lots in the foreground and for knolls, hillsides and the crests of abrupt slopes, especially if near the avenue, and taller forms for the background and on the higher levels. Undulating ground may be effectively emphasized by placing monuments of low and relatively broad lines in the lower levels and taller styles on the higher elevations. This general arrangement does not preclude low monuments from groups of higher designs if all are in harmony; in fact, variations in height are essential for artistic effect. Men in the monument profession frequently aver that architects are not successful designers of monuments. This may be true of architects in general and for the reason that monumental designing is a special branch of art. Few men in any profession in this busy world have the time to familiarize themselves in all its intricacies. The rural architect must be familiar with nature and appreciate rural scenery to successfully harmonize his structures with their environment. Likewise the designer of monuments must have a proper conception of the relation of architectural features to the landscape of the cemetery. In this experience is valuable and specializing leads to success.

The problems involved in the development of the landscape cemetery, embracing, as I have endeavored to show, a study of the principles of monumental architecture, not necessarily in all its details, but at least in its relation to landscape art, demand for their solution and a successful

development of the general scheme, watchful and intelligent supervision on the part of some person or persons representing the several interests in the cemetery.

In many of our municipalities today we find art commissions wisely appointed for the purpose of supervising the designing of public structures, particularly those of a monumental character. A similar plan has been introduced into many of our best cemeteries not as yet very systematically followed, but still accomplishing much good. In most instances the supervision is intended to be advisory rather than dictatorial.

The superintendent of the cemetery is well qualified for the diversified duties of his profession, including a reasonable degree of artistic temperament, together with a fair understanding of monumental architecture, especially in its relation to the landscape, and having, as is usual, conceived and constructed the plan of the cemetery, or if not, being competent to interpret the scheme outlined by others, is logically the man to whom the practical development of the cemetery in all its details should be entrusted. He enjoys the confidence of the lot owners and commands the respect of monument dealers. His opinions and suggestions are generally accepted as unbiased, worthy of adoption for the best interests of the lot owners and monument dealers and welfare of the cemetery.

Beyond a doubt the great improvement achieved in monumental art, principally within recent years, is mainly attributable to the awakening of the cemetery authorities to a higher appreciation of monumental architecture and landscape beauty and the persistent efforts and intelligent supervision of the superintendent of the cemetery, to which the Association of American Cemetery Superintendents through its educational influence has contributed to a degree almost immeasurable.

In my experience I have found lot owners very grateful for advice and willing to comply with our regulations and co-operate with us in all things pertaining to the development and beautifying of the cemetery. They have also displayed a broad-minded and liberal spirit by acknowledging their appreciation of that policy which recognizes the supremacy of mutual rights over individual interests, so important in many things, particularly in the selection of monuments.

Monument dealers, with few exceptions, are always very courteous and willing to co-operate with us in the promotion of our plan for the improvement of monumental architecture. They might reasonably be expected to advise and assist their clients in the selection of a monument, but we realize they are in this respect confronted by difficulties which sometimes render their influence ineffective and their best intentions on our behalf abortive. We should be sat-

isfied if they are willing to acquiesce in our regulations and submit designs of every proposed structure for approval before formally closing a contract. It is evident, then, if we desire to accomplish any marked improvement in monumental art, particularly in its relation to environment and landscape beauty, cemetery authorities must assume the initiative in an effort to unify the interests of all concerned and effect a higher appreciation of landscape art among lot owners and monument dealers than is common today.

Thus far I have endeavored to excuse the desire for memorials and consistently justify the presence of certain types of monumental structures in the cemetery. But it must be apparent beyond cavil that monuments and memorials of stone, being subject to disintegration and decay, must in time go to ruin and should therefore be considered from an economic as well as from a sentimental point of view. In their erection we are creating a legacy for our successors which will surely prove a serious problem to future generations. It should therefore be our duty to dissuade lot owners rather than encourage them in the erection of a monument. If they elect to erect a monument we should look carefully to its design, material and workmanship to insure the maximum of durability as well as beauty. We need not exclude a classic or decorated form of individual memorial which of necessity must have some reasonable height, but all plain markers (the style we should strongly recommend) should be set very low, preferably flush with the surface of the ground, a plan we should always advise or insist on when markers are set in conjunction with a monument.

In our experience we find it quite practicable to eliminate monuments from all small areas such as lots intended for one to three graves, and from a large percentage of lots of all sizes. This has become possible within recent years by the change of sentiment regarding monuments expressed by purchasers of lots. The plan is particularly beneficial in sections of comparatively small lots.

The landscape cemetery of the idealist may only be a dream, but the many beautiful cemeteries in this country in which we find some of the finest examples of monumental art, paying tribute to the taste of the lot owner, the artistic skill of the designer and the well-directed efforts of cemetery authorities, are very encouraging and incite us to greater efforts for further development and improvement.

If it were possible to carry to completion the original scheme as visualized and planned in harmony with modern ideas, the cemetery might with comparative ease be developed into the place of beauty perceived in the mind of the artist. But the "best laid schemes o' mice an' men gang aft agley," and so we sometimes find well-

conceived plans thwarted and well-intended and carefully framed regulations, if put to the test, subjected to modification, involving changes in the plan not always advantageous, but sometimes detrimental, to the welfare and beauty of the cemetery. Constant vigilance is necessary to insure satisfactory results and to guard against the introduction of some objectionable monument or other feature into the cemetery. One misplaced structure may undo the efforts of years and irreparably ruin an otherwise harmonious and charming scene.

Progress may be slow and discouraging by reason perhaps of deep-seated prejudice or peculiarly difficult conditions; but remember that reform will be long delayed unless we battle against old customs and strenuously oppose the continued erection of monuments representing poor conceptions of art, and work with energy and intelligence to instill into the minds of lot owners and monument dealers a due appreciation of beautiful scenery and artistic harmony of architectural forms.

To many of you it may seem superfluous to allude to the important function of shrubbery in conjunction with architectural features in the cemetery. I will briefly suggest that deciduous and evergreen shrubs and dwarf conifers liberally and judiciously interspersed and artistically arranged are invaluable accessories in disguising or softening the bald and often harsh effect of obtrusive stone structures, and enhancing the beauty and harmony of some beautiful and artistically designed monument.

In closing I wish to particularly emphasize this thought in my mind, that next to the mausoleum the most important single factor dominating the beauty of the landscape and affecting the maintenance of the cemetery from an esthetic and economic point of view is the monument and other memorial structures. We should, therefore, strive diligently, patiently and circumspectly to minimize the number of structures permitted, eliminate all poor designs and improve those erected in style and proportions, artistic beauty and harmony of design to environment, that the charm of the landscape may be enhanced and conserved and the cemetery become an everlasting place of beauty. Surely the attainment of this object is worthy of our best and united efforts.

MORE OR LESS PERSONAL.

J. O. Thompson recently traded his farm and all equipment near Montevallo, Ala., valued at \$50,000, and his residence, valued at \$30,000 and \$20,000 in cotton for Woodland Cemetery.

At a regular meeting of the Stringtown Cemetery Association, of Stringtown, Ill., the following officers were elected for the coming year: President, G. W. Springer; vice-president, D. S. Porter; treasurer, L. E. Whitten; secretary, J. E. Graves; overseer, E. C. Gingrich.

GROUND COVERINGS IN THE CEMETERY

*An address before the St. Louis Convention of the A. A. C. S., by
O. C. Simonds, Landscape Gardener, Graceland Cemetery, Chicago.*

Those who design, develop or care for cemeteries are seeking always to create beautiful scenery. This is right, because when friends leave us for their final resting places we wish to think of them as having attractive surroundings. An important element in nearby scenery is the ground cover. Trees develop interesting sky lines, give us shade, show us graceful or picturesque branching and produce beautiful and varied foliage, flowers and fruits, but after looking at their beauty our eyes turn naturally from them to the ground. We usually think of this as covered with grass, and for most places there can be no better cover than a rich, green velvety lawn, free from weeds, evenly cut and showing everywhere, as it rises or falls, the graceful modeling of the earth beneath. Such a surface is most agreeable to walk upon and very beautiful to see, especially when lighted up by the slanting rays of the sun toward the end of the day, with here and there the long, cloud-like shadows of trees and shrubs.

But there is not always sufficient water to keep a lawn fresh and green. Sometimes there are surfaces so steep that it would be difficult and expensive to mow them. They are even too steep to walk upon. Again there are areas so shaded that it is impossible to cover them with satisfactory turf. How should such places be treated? How does Nature cover them? With the exception of exposed rocks, wind-swept desert and wave-washed water margins, Nature covers all surfaces with some form of vegetation. Shaded ground, like that in woods, is covered with fallen leaves or with shade-loving plants, like adder tongue, bellwort, hepaticas, squirrel corn, blood-roots and ferns. Steep hillsides, before the plow arrived, were covered with some growth that prevented washing, so that small streams ran clear even after heavy rains. Often there is an undergrowth of shrubs or young trees that makes an effective covering under overhanging trees and in the open the ground is frequently covered with shrubs and vines. The superiority of these plants over grass as a protection for steep surfaces is sometimes shown during a period of drought, when a brown grass-covered hillside may show spots of green here and there where wild grape vines, Virginia creepers or bitter-sweet have become established, or other areas where sumachs, wild roses, Indian currants, hazel bushes, elderberries or other spreading shrubs retain their freshness of color. It is a pretty safe rule to cover such hillsides with plants having a woody growth.

The suggestions which have just been made regarding the use in certain places of plants other than grass as a green mantle

for the earth are as suitable for parks and home grounds as for cemeteries, but it may be worth while to call the attention of cemetery superintendents to the opportunities they have for adding an interesting variety of plants to those they commonly use, thus not only increasing the beauty of the grounds under their charge, but introducing also what may prove a measure of economy.

Let us consider various situations which present some difficulty and enumerate some of the plants which might be used with satisfaction for covering the ground.

First: Steep surfaces. Occasionally it is necessary or advisable to use ravines as roadways. Such ravines may have steep ground on either side, ground that is unsuitable for burial lots, but which may be treated in such a way as to be an attractive feature in itself. Such ground can generally be protected and at the same time made pleasing by using a combination of trees and shrubs in a way similar to that which Nature uses in protecting the borders of valleys and water courses. The writer knows of very steep surfaces in Iowa and Missouri that are perfectly protected by a growth of native trees such as oaks, hickories and lindens and an undergrowth of Indian currant. Other combinations which come to mind are masses of wild crabapples, with a few oaks extending above them; similar combinations with thornapples instead of crabapples, or there may be a grouping of thornapples and wild crabapples. Maple trees, elms, red-buds, flowering dogwoods, sassafras and all the native shrubs offer material with which most beautiful effects can be made. Often an undergrowth of vines or creepers, hepatica, bloodroots, violets, goldenrod, asters and other perennials will enhance the beauty of the entire combination of foliage and flowers. The dead stalks of goldenrod and asters are beautiful even in winter and the undergrowth of shrubs and other plants will hold the leaves which drop in the fall and which should be allowed to remain permanently for the protection of the ground and a source of nourishment for other plants. Where a cemetery is very hilly it may be advisable to introduce quite large lots which will include steep surfaces. A very beautiful lot might be developed with the steep borders covered with the native plants which delight us when we visit the woods. Some of these plants have been mentioned, but others will readily occur to you, such as our native evergreens, pines, hemlocks, red cedars and junipers, and in the East and South, rhododendrons, mountain laurels and hollies. Juneberries, red-berried elderberries and winterberries should be remembered. Each one will readily recall the

various plants that would be adapted to his locality. It is just as reasonable for a man to give, say, \$10,000 for a lot upon which can be grown beautiful specimens of trees and shrubs and beautiful groups developing an attractive landscape as it is for him to put this amount of money into a stone monument. A great deal can be done on a lot 100 feet square and there is no reason why a family lot should not be even larger.

Second: Areas along the inside of the boundary fence. In such areas a ground covering made of shrubs or evergreens with branches resting on the ground would make not only a permanent, beautiful and economical cover for the ground, but by their upward growth, with a minimum height of five or six feet, would give a grateful feeling of quietness and seclusion. In such a border the effect is best when considerable areas are covered with one kind of tree or shrub. There may be combinations of two or three shrubs or of shrubs and trees that are satisfactory, but a general mixture made up of many species is apt to have a spotted and confusing effect. Here again the leaves which drop from trees or shrubs may be allowed to remain permanently and so gradually add to the soil. It is sometimes thought that by raking the leaves all out from among the stems an appearance of greater neatness is secured, but the dry leaves really look better than bare ground. They should remain if the appearance alone were considered, but when their plant food value is also thought of and when we realize that the protecting leaves may insure a growth of early spring flowers, there is additional reason for keeping them.

Third: Areas at the corners and angles of large lots. The treatment that has been recommended for the boundaries of cemeteries is also applicable to the areas just named. A mass of shrubs or a combination of trees and shrubs makes not only the best possible ground cover, but furnishes as well a background for a monument or a background for the lot itself, even though there be no monument. Against such a background a mass of flowers, say, paeonies or iris, will extend the ground cover and furnish a pleasing bit of color. In place of paeonies and iris one might have any suitable, hardy perennial, or might use low, creeping plants like the Wichuriana roses with their hybrids, the running strawberry bush, dewberries, the American yew, prostrate junipers, or any low, attractive plant that can easily be kept within bounds.

In order to have an attractive cemetery it is necessary to have open spaces, some large and some small, but in between these spaces, framing them in or forming their boundaries, there should be foliage so ar-

ranged as to hide, at least partially, one open area from another, foliage sometimes reaching only to the height of the eye and again ascending to the top of the tallest tree. These areas of foliage make a ground cover quite distinct from the usual lawn. They make the lawn itself more effective and form the pictures which constitute the charm of any cemetery. By the almost infinite number of different kinds of plants that can be used to cover the ground and produce the banks of foliage desired one can secure the greatest possible variety. You will all remember the masses of seedling oaks with which Mr. McCarthy used to cover portions of the ground in Swan Point Cemetery and produce at the same time most interesting foliage beds with very common but very attractive material. No leaves excel those of the oak in beauty of texture and outline. We can imagine one of Mr. McCarthy's beds of oak seedlings growing until some of the seedlings become young trees, when their lower branches will run out, still forming a protecting cover. Later, when a few of them become large trees, we can imagine them as forming a background for a group of wild crabapples or thornapples, or perhaps their trunks may be surrounded with twenty or thirty lilac bushes, the sprouts of the lilacs being allowed to grow so as to form a solid stream of foliage from the ground to the height from which the oaks emerge. Such a growth, whether of thornapples, lilacs, hazel bushes, viburnums, Indian currants or any other attractive shrub, will hold the leaves which fall in autumn, keeping them from blowing about the lawn, and in addition to the artistic effect which they produce will be a protection to the trees and furnish meeting places for birds and at certain seasons an abundance of flowers. At other seasons they produce fruits attractive in appearance and very useful as food for the feathered songsters.

There are some people who will object to anything but grass in a cemetery. A

monument dealer once said that if he could have his way there would not be a tree in the cemetery, but is it reasonable to deprive ourselves of the beauty and the grateful shade of trees? Is it reasonable to prohibit the satisfaction which comes from viewing a great mound of yellow blossoms of forsythia in early spring, of viewing the great masses of lilac blossoms which come later, varying in color from purple, through lavender to white, and filling the air with fragrance? Should we deprive ourselves of the blossoms of spiraeas, the elderberries and roses? Is there not something lacking when we cannot have the fruits of barberries, viburnums, dogwoods and mountain ash? There are many people who admire all of these plants. There are some who have been in the Northern woods, thick with an intricate wild growth, who have said to the writer that they would like to have their lots covered with thickets like these Northern woods. Ashes could be buried in such lots with very little disturbance of the woody growth, or they could be strewn on the surface without burial, while the shrubs that might be disturbed in making an ordinary grave could be easily replaced.

There are those who have said that when they were through with life they would like to go back to Mother Earth. Let Mother Earth include not only the sand, the gravel, the clay and the various kinds of soil, but also the countless trees, bushes, vines, flowering plants, ferns, club mosses and even lichens with which Nature, when left to herself, covers the entire ground, and while using all of these plants let us study how to arrange them so that we shall have vistas with light flooding the foliage on the one side, with contrasting shade on the other, with leaves, flowers or fruits sending us the sunshine from most pleasing textures, shapes and colors.

The above suggestions are general in character. In a paper like this, one cannot

mention many details, and still there is a temptation to mention some places that are especially pleasing. A steep, sandy hillside, upon which grow yellow birches and hemlocks, is covered with a thick mat of the rich green leaves of the partridge berry, and this mat is dotted with red berries. Interspersed at intervals on this bank are club mosses and wintergreens. This covering, which is in a bit of Michigan woods, is always attractive in appearance without the slightest attention. There are places in many cemeteries where the hint given by this bit of nature might be utilized to advantage. In an opening in some Maine woods, bordered with spruce, the ground cover is carried out from the spruces with prostrate junipers. Then there is a considerable open space among the junipers covered with wintergreens and mosses, the latter varying from dark greens to a very light bluish gray. There are also a few ferns. A description seldom conveys the full charm of a place, and still if you imagine the quiet woods, the deep shade of the narrow spaces extending into the spruces, the bright sunshine coming down on the junipers with their blue berries and on the ground cover of mosses, can you think of a more peaceful and beautiful resting place for one's ashes. We have heard of the spirits of the departed, and while we really know nothing about them, we can imagine them resting contentedly in an opening like this sunny spot in the Maine woods, listening to the notes of a hidden thrush or the passing of a breeze through the branches without fear of being disturbed by the noises of civilization.

In conclusion, let us strive, while retaining beautiful lawns in large portions of our cemeteries, to introduce here and there along borders, on steep hillsides, along ravines and margins of water, more woods, more wild flowers, more nesting places for birds and more of the charm of mystery, which is one of the delightful attributes of Nature.

CEMETERY IMPROVEMENTS AND EXTENSIONS

A cemetery board of managers is to be created in Elgin for the purpose of receiving and managing bequests for the upkeep of individual lots and graves. Bequests are to be invested in interest-bearing securities. The fund so created is to be a perpetual care and improvement fund. Interest from each bequest is to apply on the lot specified by the donor. Any surplus is to become a sinking fund, to be used for that lot or on the cemetery grounds. No bequest smaller than \$100 is to be received.

The Mount Scott Cemetery of Portland, Ore., announces that it will spend \$25,000 in repairing the gate lodge building, the interior of which was recently destroyed by fire.

As a gift to the cemetery, Charles S. Watts and J. W. Brown erected a rustic

bridge in Greenwood Cemetery, of Little Rock, Ark.

The bodies interred in the Indian Cemetery at Wisconsin Point will be removed to an established cemetery in Superior. The site of the old cemetery is now the property of the Interstate Railway Co. and is going to be used for commercial purposes.

The request of the city of Windsor, Colo., for the use of enough water to keep up fifty cemetery lots in the city, in addition to that already supplied for city purposes, to be paid for at the same rate as other city water, but to be on a separate meter, was granted.

Washington Court House, Ohio, was recently highly complimented in the local press on having one of the most beautiful

burial grounds in the country in a town of its size. Under the supervision of Mr. Gossard, the superintendent, the grounds have been kept immaculate and the landscape setting made very attractive.

The City Commission of Salt Lake City, Utah, has passed the revised cemetery ordinance authorizing the city sexton to improve lots permanently under his care at the expense of the owners, and making it unlawful to erect or maintain fences, coping and hedges about lots in the cemetery.

Mr. W. L. Stewart, of Norwood, Ill., is leading the work of raising funds for the benefit of the Norwood Cemetery.

The Chicago Cemetery Association reports that it has reduced its mortgage debt during the year from \$25,000 to \$13,000 and expects to pay at least 3 per cent divi-

dend for 1914. Its last annual report, February 1, 1914, shows \$140,140 outstanding capital stock and surplus of \$91,935. The report of the superintendent stated that "the number of funerals showed a good increase over the preceding year." Last year the company paid 4 per cent on its \$100,000 of original stock and interest at the rate of 4 per cent a year on accounts received during the year for new stock sold.

The old cemetery lying along the T. & P. & W. Railroad, just east of Weston, Ill., is to be opened up again, after having been

The new cemetery at Youngstown, Ohio, known as Lake Park Cemetery, will soon be ready for interments. Work is being carried on under the supervision of Mr. Kelly.

A short time ago the residents of Helena, Mont., held a meeting for the purpose of organizing a committee to take charge of the improvements to be made in the old Catholic Cemetery of that city.

At a recent meeting of the Commission Council of Oshkosh, Wis., it was proposed that forty acres of land be purchased for a new cemetery.

Schaad recently inspected St. John's Lutheran Cemetery of Beardstown, Ill., with a view to making plans for improvements in the burial ground.

Negotiations are under way for the purchase of a farm just east of the Case subdivision of Elmhurst, Ill., for cemetery purposes. Residents of this district, however, oppose the project, as they believe it will prevent the growth of the city in this direction.

The Elm Lawn Cemetery Co., of Elmhurst, Ill., has improved its grounds by the addition of several ornamental stone



THE OLD AND THE NEW WAY OF SELLING MONUMENTS.



PERRY & THOMPSON

practically deserted for a number of years.

Linwood Cemetery Association, of Galesburg, Ill., has recalled the contract for the cement curbing and gutters in this cemetery, owing to a misunderstanding of the specifications.

New Cemeteries and Improvements.

The Edgewood Cemetery Co., of Greenwood, S. C., was recently incorporated with a capital of \$5,000. W. V. Blythe is president of the company.

Cottage Hill Cemetery Association, of Austin, Tex., was recently incorporated by E. A. Guynn, S. M. Francis and J. F. Wester.

A company was recently incorporated at Columbus, Ohio, with \$75,000 capital stock, by Dr. J. Van Fossen, for the purpose of establishing a new cemetery, to be called Woodland Park. Plans of the grounds were prepared by Mr. Hickey, of Detroit.

The normal expense of maintaining the City Cemetery of Alton, Ill., so far exceeds the yearly income that unless the citizens raise funds the old burial place is in danger of being abandoned. A committee has been organized to investigate whether or not an assessment could legally be levied on the lot owners.

Work has been commenced on the construction of a new fence around the cemetery at Freeport, Ill.

The citizens of West Monroe, La., will organize a cemetery association for the purpose of carrying on the Hasley Cemetery movement. Every individual contributor is considered a member of this association.

The Union Cemetery Association, of Uniontown, Pa., recently let the contract for two imposing entrances to Oak Grove Cemetery on West Main street and an iron fence around the cemetery to McDonnell & Sons, of Buffalo, N. Y. The improvements will cost about \$5,000 when completed.

Sexton G. D. Swain has commenced work on changing Pleasant View Cemetery of Kewanee, Ill., so that about sixty-two new lots will be available. The cost of the work will be about \$100.

A fund of \$50 is being raised by the "Favorite," of Bonham, Tex., to improve English Cemetery.

The Cleveland Cyclone Fence Co., of Cleveland, Ohio, was awarded the contract for the construction of a fence around the Rockport City Cemetery.

John Diehl, Fred Schleuter and John

bridges and an artificial lily pond. The construction of rest houses located in various places of the cemetery is about to be begun.

A number of the ladies of Carrollton, Ill., have organized a committee to clean up old Maberry Cemetery.

A new wire fence and other repairs are being made to the Catholic Cemetery, southwest of Silver City, N. Mex. Jose Montez and a crew of men are in charge of the improvements.

The grading work for the extensive improvements to be made at Oakwood Cemetery, upper Alton, Ill., will soon be completed, after which the concrete work on the driveways will be commenced.

Waverly Glenwood Cemetery Co. has been incorporated at Albany N. Y., with a capital of \$5,000 by J. M. Lyford, Barry W. Knapp and F. E. Lyford, of Waverly.

At a meeting of the Board of Trustees of the Hinman Cemetery and Cemetery Association, of Griggsville, Ill., it was voted to raise an endowment fund of \$1,000, the income from this fund to be used for the general keeping of the cemetery. Mrs. M. Y. McMahon, Mrs. Mary Strother, Mrs. E. M. Orr and C. F. Ca-

pella are the committee in charge of the work.

In the presence of several hundred people, including some of the most representative and distinguished Hebrews from all parts of Greater Boston, the Meretz Cemetery at Montvale was dedicated recently with impressive ceremonies, according to the Hebrew ancient custom.

The new iron fence along the Poughkeepsie Rural Cemetery, Poughkeepsie, N. Y., is nearing completion.

Rev. Father Ciesla, pastor of SS. Peter

and Paul's Polish Catholic Church, of Spring Valley, Ill., is searching for the marauders who entered the Polish Cemetery of that city recently and overturned several monuments.

At a recent meeting of the City Council Mayor Eckert, of Princeton, Ill., vetoed an ordinance regulating the placing of monuments in Oakland Cemetery. The ordinance provided for the erection of monuments under the supervision of the superintendent of the cemetery and allowed a fee of 50 cents an hour for his services. This met

with disfavor, owing to the fact that it failed to stipulate any plan by which the cost could be estimated in advance.

Congress has appropriated \$5,000 for the removal of Chippewa Indian bodies from the grounds in the vicinity of Wisconsin Point and their reinterment in an established cemetery in Superior. This amount also covers the cost of a suitable monument for each grave.

The old city cemetery of Macon, Ga., recently caught on fire. The fire was easily extinguished by the city fire department, however, and the damage was slight.

CEMETERY MEN IN GOOD ANNUAL MEETING

The twenty-eighth annual convention of the Association of American Cemetery Superintendents, held at St. Louis, Mo., October 6, 7 and 8, 1914, was attended by a representative gathering of cemetery superintendents and their wives and daughters to the number of approximately one hundred and fifty. Members from twenty-two states, the District of Columbia and Canada were present to participate in the excellent program and enjoy for the second time in the history of the organization the hospitality of the citizens of St. Louis. The weather man and the entertainment committee worked together most harmoniously. Fine fall weather prevailed until noon of the third day, when rain began falling while the visitors were enjoying the beauties of the Missouri Botanical Gardens and kept them indoors until the close of the convention.

It was Veiled Prophets week in St. Louis, an event not unlike the Mardi Gras carnival in New Orleans, observed annually by a brilliantly illuminated street pageant and followed by a grand ball. The city was gaily decorated for the occasion and thronged with visitors.

The well appointed convention hall of the Planters Hotel was comfortably filled when President M. P. Brazill called the meeting to order. Rev. J. P. Harrington, trustee of Catholic Cemeteries, Providence, R. I., invoked the divine blessing, and Hon. Henry W. Kiel, Mayor of St. Louis, extended the visitors a cordial greeting, to which response was made in a very happy vein by James Currie, Milwaukee, Wis. Dr. George T. Moore, director of the Missouri Botanical Gardens, supplemented the Mayor's address by extending greetings from the famous institution over which he presides.

The president's annual address, read by Mr. Brazill, was as follows:

We are now opening our twenty-eighth Annual Convention and it becomes my duty, as president for this year, to call your attention to some of the history, and to suggest some necessary changes of policy, tending to the future welfare of our Association. For the history I am indebted to our historian, Mr. Cressy. The suggestion for an improvement in our future policy is the result of my own observations, as an active member for twenty-five

years, and also occasional remarks from other members.

The necessity of repeating some of the history of our Association is to answer questions asked by persons not acquainted with the objects of our organization, who may think it superfluous or unnecessary.

At the solicitation of Mr. Chas. Nichols, an old superintendent at Newark, New Jersey, a meeting of cemetery superintendents was held at the office of Spring Grove cemetery, Cincinnati, Ohio, on the 9th day of October, 1887. There were twenty-five cemetery superintendents present, representing twelve states. At this meeting was organized the Association of American Cemetery Superintendents.

The object of the Association is to educate cemetery superintendents and other cemetery officials in the best and most approved plan of conducting and improving cemeteries on modern lines, now generally known as the Park Lawn Plan.

Conventions have been held every year at some of the large cities of the States. Some cities have been so interested in our work, as to invite and entertain us twice. During this time several hundred cemeteries have been represented at our meetings.

The very noticeable improvements in our cemeteries during this period of twenty-seven years, is ample evidence of the educational influence of our teaching in all this time, and the good work is still going on.

The studies of a cemetery superintendent are more numerous than is generally supposed. He must be competent to grade and lay out grounds, subdivide, survey and plat all subdivisions. Construct and drain all roadways and wet grounds. He must know something of the ornamental branches of horticulture, such as planting trees, shrubs and flowers, and other numerous details connected with cemetery management.

The papers prepared by our members for the conventions are considered educational productions, being prepared by men of good education and several years of practical experience in their line of business. To young students and graduates from our colleges, just through with their text books, these papers are considered of considerable importance. As evidence of this, I had an application from one of our western universities last spring, for the reports of our conventions. The professor stating that they were used by the students in studying landscape gardening and floriculture.

As an educational feature of our meeting here, we have assigned the last day for a study of plants and flowers at the Missouri Botanical Gardens, the Horticultural Department of the Washington University; this will be a day at school. Dr. George T. Moore, Director of the Gardens, and Professor of Botany at the University, kindly tendered us an invitation. He will be present himself and his principal assistants to explain the habits of the different classes of plants very numerous and varied in these gardens.

The executive officers experience considerable difficulty in getting our members to prepare papers for the conventions; the general objection is that the subjects have been thrashed out, and they don't want to come into the limelight too often. This excuse may seem plausible enough, but we ought to remember that we must make sacrifices for others and that going over old ground is not so objectionable, as this is going on since the world was young. Repetition is going on in every line of business, and especially in literature. While our modesty may

be commendable, our duty to our associates should outweigh this objection. We should aim to write short papers, condensing our subjects. This may be an art in itself, but it is the most approved plan and is generally most appreciated. It is true that the writing of papers is confined to a few of our members. This reflects most credit on the gentlemen who have labored each year to make our conventions interesting and a source of instruction to our members. They should receive the full credit.

At our last convention in Buffalo we had considerable trouble with some of our young members. They accused us of using the "Steam-Roller" in the nomination and election of officers, also that in the appointment of committees, we confined ourselves to old members, while the young members were forgotten in these appointments. If there is any ground for these complaints, it should be changed and a new mode of procedure inaugurated. In the nomination and election of officers, the fullest liberty should be given to all members of the convention, and no closing of nominations of officers should be resorted to. This course of prematurely closing nominations is calculated to stunt the growth of the organization and confine its operations and benefits to a select few.

In the appointment of committees it would be advisable to have an unwritten rule of naming an old member for chairman, and the balance of the committee to be new members. This would give more satisfaction and initiate the new members in the working of our Association.

As was said before, this Association was organized for the education of cemetery officials. How is it filling its mission? Is there any improvement to be made?

At the Convention held at Cincinnati in 1897, ten years after the first convention was held there, it was proposed in the interest of mutual education, to have a selection made of the best papers read at the previous conventions and published in pamphlet form, for the use of the members and especially for the use of new members. This proposition was fortunately acted upon, and a large pamphlet or book bound in cloth was published by "Park and Cemetery," under the title of "Modern Cemeteries", was the result. This book is still one of reference for many of our members.

A similar proposition was made at the Providence Convention in 1907, but was not received favorably as the first publication was not a financial success. This was a narrow commercial view, and entirely unworthy of an educational organization like ours, when there were ample funds in the treasury to carry out the small undertaking.

It is often said that there is too much commercialism in this country, and its principles filter into too many classes of business or undertakings not essentially financial or commercial.

I would suggest to this convention that this matter be taken up again, and a selection of the best papers since the Cincinnati Convention of 1897 be published in book form, for the use of the present and future members of this Association. It will be found a very useful book of reference, and an important contribution to cemetery literature for the education of new members. It will have an important influence on State organizations, which are auxiliaries to the National organization.

We must make renewed efforts to interest our members and attract them to our conventions, and try to add to our literature if we are to keep our reputation as an educational association.

The report of Secretary-Treasurer Bellett Lawson, Jr., showed a substantial fund in the treasury and a membership of approximately two hundred and fifty. Five members died during the past year, viz.: C. B. Jefferson, Philadelphia, Pa.; H. J. Kieckhefer, Milwaukee, Wis.; Alex. McKerichar, Washington, D. C.; R. D. Fletcher, Titusville, Pa., and F. B. Sercu, Buffalo, N. Y.

The secretary reported having carried out the instructions of the Buffalo convention in regard to the gold badges bearing the monogram of the A. A. C. S. and he is now prepared to fill orders for them either in the form of buttons or pins. The price is \$1.15, postpaid. It is suggested that the badge will make a very appropriate Christmas present for members not already provided with a suitable badge of the association.

F. H. Rutherford, superintendent of Hamilton Cemetery, Hamilton, Ont., and president of the Canadian Cemetery Superintendents' Association, brought warm greetings from that loyal daughter of the A. A. C. S.

The afternoon session was devoted largely to three papers, which with the discussions that followed each gave ample opportunity to discuss the subject of monuments, etc., from every angle: "Monuments and Other Memorials," by James Currie, Milwaukee, Wis.; "More About Mausoleums," by Frank Eurich, Detroit, Mich., and "The Cemetery and the Monument Man," by Alex. Hanton, superintendent of City Cemeteries, Barre, Vt. A motion to have Mr. Currie's paper printed in pamphlet form, to distribute among lot owners, was referred to the Executive Committee. In response to the question, "How to reach the lot holder with information regarding monumental material and design," Mr. Currie replied: "Monumental dealers are advised that the rules of the cemetery require that designs and monuments must be submitted to the cemetery both for the protection of the cemetery as well as the lot holders. Mr. Currie's address is printed in full on another page and Mr. Hanton's follows herewith:

The Cemetery and the Monument Man. *By Alex. Hanton.*

For years the cemetery superintendent has devoted his time and energy chiefly to details of landscape, but recently there has been an awakening to the fact that other matters of equal or paramount importance should engage his attention. While not wishing to minimize the importance of artistic landscape, I am of the opinion that the cemetery officials should encourage the erection of better and more artistic memorials.

My suggestion for carrying out this idea would be to encourage and foster a spirit of co-operation between the cemetery superintendent and the manufacturer. In my home city—the largest monumental granite center in the world—there is at the present time an attempt being made to encourage the demand for high-grade artistic memorials. It is the duty of the cemetery superintendent to support the manufacturer in his attempt to create a demand for quality and art.

No cemetery, however beautifully laid out, can be really beautiful if it contains unsightly monuments.

To my mind, the first thing to be decided upon is the material. A memorial erected to the memory of loved ones, to be handed down to posterity, should be built of the finest material it is possible to procure. The spirit of pure commercialism is sadly evident in the memorial business, with the result that our cemeteries are filled with unsightly things called monuments, built of material that is wholly unfit for monumental purposes. It is not enough that the memorial be artistic in design; it must be built of material that has the qualities requisite to insure its withstanding the ravages of time. The average person is not familiar with the different granites that are being produced, but is generally in need of disinterested intelligent advice in the selection of his memorial. Cheap material may look good for a while, but when erected in our cemeteries and exposed to climatic conditions, it soon becomes an eyesore and wholly unworthy to be classed or designated as a memorial. The dealer who sold it may be out of business, the purchaser may be dead and gone, but that unsightly monument, purchased with the best of intentions, remains in our cemeteries as a mockery, to be pointed out by community mausoleum promoters as an argument in favor of their scheme of burial and to convince the intending purchaser of a memorial of the fallacy of the monument business. Is there not an excellent opportunity here for the cemetery superintendent to step in and help the uninformed purchaser, while at the same time he will be performing a duty which he owes to his cemetery and posterity? This may be taking a too radical position, but you will agree with me, I am sure, that the quality of the material with which a memorial is built is the foundation upon which we must build if we succeed in our endeavor to reach perfection in cemetery art.

I do not think it prudent at this time to take radical action to actually prohibit the use of certain material, but it seems to me that we should exert our influence, whenever possible, to accomplish desired results. There are some people who maintain that the ideal cemetery should not contain a monument of any kind—that the modern landscape cemetery is much to be preferred. However, it is a fact that this idea is not accepted by the large majority of lot owners, and we must face the situation as it exists. The very idea of a so-called modern landscape cemetery had its inception from the fact that our cemeteries contain a large percentage of inartistic and poorly finished monuments. This fact alone will not result in the entire elimination of monuments from our cemeteries, but rather it will result in an ever-increasing effect on the part of those interested in the monument business to promote the sale of artistic and well finished memorials. With this fact established, we must admit that by our failure to co-operate with the manufacturer to promote this campaign we are practically encouraging the old idea that anything set upon a grave is a monument and will sometime be severely criticised for our failure to exert whatever influence we may possess.

With the quality of the material for our monument assured, the next step is to select the design. Much has been said and written on this phase of the subject, and it is apparent that monumental architecture is being considered seriously by progressive producers of memorials. The old idea of simply striving to have something different than the other fellow is being augmented by a desire to have the memorial show the designer's art and the skill of the artisan. It is often no easy task to convince a prospective purchaser that the particular design which he has selected is not really artistic and he often resents what he considers outside interference. He particularly is suspicious of suggestions from the dealer or manufacturer, fearing that they are selfishly interested. Here, then, is another opportunity for the cemetery superintendents to exert a powerful influence for good by co-operating with the manufacturer and dealer. His suggestions are more often considered as coming from an impartial source. The retail dealer in too many cases is inclined to be influenced by a desire simply to sell whatever he can make the most money on, but by the co-operation of the cemetery superintendents and the manufacturer this situation can be materially remedied.

I do not wish to burden you with a lengthy discussion on this subject, but I would like to impress upon you the importance of co-operation in order that present unsatisfactory conditions

may be improved. The erection of a monument is no longer an experiment. We should profit by the mistakes of the past. We are no longer ignorant of the requisites of a satisfactory memorial. Why should we not more strongly than ever before use this knowledge to influence and educate prospective purchasers of memorials, even though we may have to make enemies. The truth will hurt no one. If we knew that a certain material is wholly unfit for monumental purposes, why should we not be free to condemn it? We are not rendering a full account of our stewardship if we fail to exert our influence and report true conditions to inquiring purchasers. May the day be not far distant when only the finest material, the most artistic designs and quality of workmanship, will be used in the building of a memorial. Then, and only then, may we expect to find an ideal cemetery.

Mr. Eurich's address will be printed in a later issue of PARK AND CEMETERY.

W. N. Rudd, president of Mount Greenwood Cemetery, Chicago, who was to have delivered an address at this session, was detained at home by sickness.

The daylight hours of the second day were devoted largely to sightseeing. Through the courtesy of the local funeral directors twenty-nine autos, five and seven passenger cars, all well filled, made up a procession that attracted no little attention as it wended its way through the principal business and residential streets of the city and over the beautiful park and boulevard system and into Bellefontaine and Calvary cemeteries. The grounds of these cemeteries, which are separated by a city street, cover a combined area of approximately 845 acres, only partially improved. Handsome specimens of native trees abound and distant views of the surrounding country may be had from points of vantage. The program did not provide for the usual tour of inspection of the grounds on foot, hence only a brief stop was made in Calvary, where the group picture illustrated herewith was taken. A revolving camera was used for this purpose, which will explain why certain members appear at each end of the picture. They exercised their agility to accomplish it, much to the amusement of onlookers. Calvary Cemetery sustained its reputation of being one of the best kept Catholic cemeteries in the United States.

Light refreshments were served under the Anheuser Busch en route, and when the hotel was reached the guests had been given a comprehensive view of the city and its environs in a ride of approximately fifty miles.

At the evening session Bellett Lawson, Jr., read a paper showing the advantages of "Concrete Inclosures" for cemetery grounds and describing in detail how three styles of fencing could be made by that method. This will be printed in a future issue.

John Reid, Detroit, Mich., asked for more time in which to finish his paper on "A Few Hints on Old-Fashioned Flowers." The paper will be printed in the usual report of the convention. It will appeal for a wider use of our beautiful native perennials and shrubs.



ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS

C. G. T. Flaherty, St. Agnes Cemetery, Albany, N. Y., read his first paper before the convention, in which he discussed "The Care of Lots and Monuments" as practiced in his cemetery. His address was as follows:

Care of Lots and Monuments.

By C. T. G. Flaherty.

After all that has been said and written relative to the care of lot, monuments, etc., little else remains for me to say regarding that interesting subject.

This paper is written mostly for the benefit of superintendents who have been recently placed in charge of homes for the dead, and, perhaps, to them I am not telling anything new.

However, I offer my most humble apologies for any shortcomings and blame it on our most worthy and esteemed president, who called upon me to read a paper of my own selection.

All new cemeteries wherever possible should sell all lots including perpetual care. The neglected appearance of thousands of lots in some of the older cemeteries, containing expensive monuments and markers, demands this. It is the crying shame of the age to see such thoughtlessness on the part of survivors of dear departed ones who in a majority of cases can very well afford to attend to it. Where cemeteries can afford it, and it is known that no one interested is alive, as an act of charity and for the general appearance they should keep those lots and monuments in order.

In the older cemeteries all choice lots should be sold including perpetual care. For those who cannot afford perpetual care at the time of purchase of the lot, but who may be able to do so later, a certain part of the cemetery remote from the perpetual care sections may be sold to them. In the meantime they should try and pay by the season.

I will now endeavor to explain the various kinds of care which are in vogue in some cemeteries. We have the ordinary perpetual care, which means the cutting of grass on an average of twice a month during the season and keeping the graves in repair, also pruning shrubs. Then there is the special perpetual care, which means to cut the grass on an average of once a week while the season lasts, also keeping graves in repair and pruning shrubs. We also have ordinary season's care and special season's care, which include only the cutting of grass, the same number of times as on a perpetual care lot.

Those who wish to have monuments, markers and other stone work attended to and to arrange for flower beds, care of myrtle, top dressing, etc., may do so, either by the season or in perpetuity, by paying a certain sum of money, the interest upon which will be sufficient to properly care for those things they desire.

As an illustration of how popular perpetual care is at the present time to what it was before this association was organized, I will give you one instance, that of St. Agnes Cemetery, Albany, N. Y. From the year 1867, when the cemetery was incorporated, to the year 1887 only eight lots were in perpetual care. There are now over 1,100 lots in perpetual care.

For further information relating to perpetual care I would suggest the members refer to a book entitled "Modern Cemeteries," which was issued in the year 1897, pages 112, 116 and 119.

The Question Box provided an interesting hour.

James Currie summed up the Sunday funeral problem by saying: "The only way to abolish Sunday funerals is to abolish them." This was done at Forest Home, and other Milwaukee cemeteries followed the example. A resolution was adopted reiterating in substance former action on the same subject, to-wit: It is the sense of this convention that Sunday funerals be discouraged. A majority of the cemeteries represented prohibit funerals on Sunday except in cases of emergency. An extra charge of \$3 to \$5 is made at many cemeteries for the purpose of discouraging burials on that day.

The closing day of the convention was spent at the Missouri Botanical Gardens (the old Shaw Gardens), now operated in connection with Washington University. Guides accompanied groups of visitors through the conservatories and around the interesting grounds until driven to shelter by rain. A buffet luncheon was served in the old Shaw homestead and the concluding session was held in the classroom of the library.

A paper by O. C. Simonds, Chicago, on "Ground Covering," printed elsewhere in this issue, was read by G. L. Tilton, of that city. It gave a wide range of material, with practical suggestions for its use.

"Calvary Cemetery (N. Y.): Its Features," by J. J. Cunningham, the superintendent, revealed some interesting data concerning the largest Catholic cemetery in the United States. The cemetery occupies nearly 400 acres and the burials average sixty a day.

"Flower Displays Without Rain," by William Ohlweiler, general manager of the Missouri Botanical Gardens, showed what could be accomplished in the way of conserving moisture by mulching and soil cultivation where "the rainfall is erratic" and furnished lists of the more desirable annuals, perennials, for such localities. He

predicted the addition of many good plants "from our desert floras" within the next few years. His address will appear in a later issue of *PARK AND CEMETERY*.

In an admirable paper on "Pictures in Park Cemeteries" John Noyes, landscape designer, Missouri Botanical Gardens, dwelt upon a subject that has received but little attention from cemetery superintendents. Under the headings, "Views," "Vistas" and "True Pictures," he discussed esthetic conditions that in the mind of many belong in the realm of the impossible. He advised his hearers to add to their accomplishments "a bit of the artist; you will enjoy your cemetery a great deal more and will be bound to improve it." This address will appear in full in an early issue of *PARK AND CEMETERY*.

The Committee on New Members reported the following additions: Charles W. Ross, Newton, Newton Center, Mass.; M. S. Andes, Elmwood, Shelbyville, Ill.; William K. Bradbury, Earlham, Richmond, Ind.; Charles Boettger, St. Marcus Cemetery, St. Louis, Mo.; A. W. Ellyson, Valhalla, St. Louis, Mo.; David Koeller, Sr., St. Peter's, St. Louis, Mo.; John Luetig, St. Louis, Mo.; Oscar McNear, Columbia, Mo.; Mrs. Bess R. Parker, Park Cemetery, Carthage, Mo.; Ed Reichardt, Little Rock, Ark.; George W. Salee, Jefferson Barracks, Mo.; Owen T. Smith, Oakland, Freeport, Ill.; John Gibson, Bay View, Bellingham, Wash.; James Wilson, The Evergreen, Elizabeth, N. J.; Thomas J. Lavin, secretary, Park Lawn, St. Louis, Mo.; Joseph Lear, Memorial Park, Wilmette, Ill.; A. W. Pohnan, Mt. Sinai, St. Louis; William A. Stark, Concordia, St. Louis.

The Memorial Committee submitted appropriate resolutions of sympathy to be sent to the families of members deceased during the past year.

The committee appointed to consider the recommendations made in the president's annual address reported favorably on the suggestion that a compilation of the best addresses, delivered from 1897 to date, be made and published. Referred to special committee with power to act.



CONVENTION AT ST. LOUIS, OCTOBER 6, 7 AND 8.

Other recommendations were approved and referred.

This committee also recommended that the by-laws be so amended as to provide for the election of members of the Executive Committee as follows: The retiring president to become a member of the Executive Committee and serve one year as chairman; one member to be elected for two years and one member for three years. This matter was referred to the next meeting for action.

James Y. Craig, superintendent, Forest Lawn, Omaha, Neb., was given a very pleasant surprise in the form of a resolution which read as follows:

"Whereas, Our highly esteemed friend and fellow member, James Y. Craig, superintendent of Forest Lawn Cemetery, Omaha, Neb., and a member of the Association of American Cemetery Superintendents since 1888, present with us on this occasion, observed the seventy-fifth anniversary of his birth, Monday, October 5, 1914.

"We, the undersigned members of the Association of American Cemetery Superintendents, in convention assembled at St. Louis, Mo., October 6-8, 1914, do tender him this testimonial of our hearty good wishes for his continued health and prosperity and for many happy returns of his natal day."

This resolution was handsomely engrossed and bound in book form with brown limp leather covers. It contains the autograph of every member who was present on the last day of the convention. The title page is inscribed in colors: "A testimonial of appreciation to James Y. Craig from A. A. C. S." Mr. Currie made a fitting presentation, to which Mr. Craig responded briefly, but with much feeling, in expressing his gratitude for the unexpected tribute.

The Committee on Resolutions thanked everyone, from the Mayor down, who had contributed to the successful convention.

The officers elected for the ensuing year are:

President—Thomas Wallis, Rose Hill Cemetery, Chicago.

Vice-President—Jas. Warren, Jr., North Burial Ground, Providence, R. I.

Secretary-Treasurer—Bellett Lawson, Jr., Elmwood, River Grove, Ill.

Executive Committee—J. A. Reed, West Lawn, Canton, O.; H. S. Adams, Forest Hills, Boston, Mass.; W. B. Jones, Highwood, Pittsburgh, Pa.

Minneapolis Minn., was chosen as the next place of meeting. It was suggested that superintendents who intend going to San Francisco and San Diego in 1915 could travel together and go by way of Minneapolis.

CONVENTION ECHOES.

The A. A. C. S. now has three women members: Mrs. E. E. Hay, Erie Cemetery, Erie, Pa.; Miss Daisy M. Blain, assistant superintendent, Elmwood, Detroit, Mich., and Mrs. Bess R. Parker, secretary, Park Cemetery, Carthage, Mo.

The Ladies' Committee which included the wives and daughters of the local cemetery men, co-operated with the Convention Committee in providing delightful entertainment for their lady guests. A luncheon, two theater parties, the Veiled Prophets ball and visits to the principal dry goods stores left a pleasant impression of the city and the hostesses who had the entertainment in charge.

J. G. Constable, manager of the Cleveland branch of the Vermont Marble Co., and N. H. Archibald, manager of the St. Louis branch of that company, renewed old acquaintances and made new ones among the superintendents. They also distributed copies of a handsomely illustrated booklet.

The Frigid Fluid Co., Chicago, manufacturers of their patent grave lowering device, was represented by Thomas H. Van Gelder and Thomas H. Carney, who displayed the device and explained its advantages.

Rowe Morrison, Chicago, and Harry L. Davis, Syracuse, N. Y., representatives of

the Harrison Granite Co., New York, were in attendance.

The St. Louis Convention Committee was composed of the following members: F. Hotchkiss, Bellefontaine; J. Leuthge, New Pickers; J. A. Schmiemeier, St. Matthews; A. E. Todt, SS. Peter and Paul, with M. P. Brazill, Calvary, ex-officio. The convention program was well arranged and creditably carried out.

Robert D. Boice, Geneseo, Ill., the esteemed octogenarian member of the A. A. C. S., was present, accompanied by his assistant superintendent, Louis F. Reher.

John W. Keller, Mt. Hope, Rochester, N. Y., was given an informal reception at Powers Hotel, October 1, 1914, the twenty-fifth anniversary of his connection with the cemetery and the fifteenth anniversary of his appointment as superintendent. In referring to the occasion the local press compliments Mr. Keller very highly on what has been accomplished in the improvement of Mt. Hope during his administration.

The Cincinnati 1887 group was represented this year by Mr. and Mrs. F. Eurich, Detroit, Mich.; Mr. and Mrs. George W. Creesy, Salem, Mass.; John Reid, Detroit, Mich., and R. J. Haight, Chicago. The two first-named members have an unbroken record of attendance at every convention of the association.

St. Louis has twenty-eight cemeteries, the largest and best known being Calvary and Bellefontaine, the only ones visited by the A. A. C. S. In the southwestern part of the city, six miles from the city hall, there is a group of eight cemeteries, covering an area of approximately 340 acres. These enclose some of the oldest burial places in St. Louis. Valhalla and Park Lawn, the most recent additions, are modern in design and management. The new sections of SS. Peter and Paul, the German Catholic Cemetery, are on the lawn plan. The Hebrew Cemetery has the credit of being one of the best kept burial places in the city. Descriptions and views of Calvary, Bellefontaine and SS. Peter and Paul are given elsewhere in this issue.

THE MODERN CEMETERIES OF ST. LOUIS

Descriptive Review of the Principal Cemeteries Visited by the Cemetery Superintendents in Convention.



UPPER LAKE, SEEN FROM THE EAST, BELLEFONTAINE CEMETERY.

St. Louis has a number of modern, highly developed cemeteries that afforded many interesting features for the field study of the members of the A. A. C. S. during their recent convention in that city.

Those who were present at this convention and those who missed this rarely interesting meeting will be glad to review the principal facts concerning the management of the leading cemeteries in that city and to learn something by description and pictures of the character and appearance of these modern burial grounds.

The two leading cemeteries of St. Louis, Bellefontaine and Calvary, are among the most beautiful and best managed cemeteries in the West.

Bellefontaine.

Bellefontaine Cemetery is an up-to-date park cemetery of 333 acres. The ground is hilly and wooded and the natural vegetation has been carefully preserved and enhanced by careful planting and landscape development to make fine views and striking scenic effects. Probably between 50 and 75 per cent of its area is in use. The original plan was made and the development of the grounds begun by Almarin Hotchkiss, the father of the present superintendent.

From 8 to 10 per cent of the lots are under perpetual care. A charge for annual special care is made according to the size. The price of lots is from \$1 to \$3 per square foot. The number of annual interments is between 700 and 800. The total number to date is about 50,000.

The present officers of the Bellefontaine Cemetery Association are: President, Geo. R. Lockwood; vice-president, H. N. Davis; secretary-treasurer, Robert E. Williams; superintendent, F. Hotchkiss.

was incorporated under the name of the Rural Cemetery Association by an act of the General Assembly of Missouri, approved March 7, 1849. The first purchase of land, embracing a tract of one hundred and thirty-eight and fourteen hundredths acres, was completed on the 12th day of July following. A superintendent was appointed on the 21st of August, and the work of clearing up and laying out the grounds commenced under his direction on the 5th of October. On the 15th day of May, 1850, the grounds were dedicated as the "Bellefontaine Cemetery" and opened for the selection of lots.

Additions to the ground have been made from time to time, giving the whole present area of the cemetery three hundred thirty-two and one-half acres.

The amendments to the charter, proposed by an act of the legislature, approved March 1, 1851, were adopted by the association at a meeting of the stockholders held on

the 8th day of November in the same year. By these amendments the name of the corporation was changed to the Bellefontaine Cemetery Association and authority given the Board of Trustees, after all debts should be paid, to determine by by-laws (subject to the approval of the stockholders) to pay off the stockholders and make lot owners holding not less than eight hundred square feet the corporators.

By a subsequent amendment to the charter, approved March 19, 1866, and accepted by the stockholders, the corporate powers of the association were vested in a board of fifteen trustees, required to be lot owners, who were to be chosen jointly by the former stockholders and by owners of lots containing not less than four hundred square feet, which Board of Trustees was made a perpetual body, with authority to fill all vacancies from among the lot holders, by a majority vote of their whole number. In this body now, and for all future time, rests the title, control and management of all the property and affairs of the association, to be administered by them for and in behalf of the present and future lot owners in the cemetery.

Lots in the cemetery are only laid out when selected, and may be procured of any desired shape, and of any size not less than three hundred superficial feet. Every lot fronts either on a carriage road or pathway sufficiently wide for the passage of persons on foot, and is entirely separated from any other lot either on the sides or rear.

By its charter the grounds are secured for cemetery purposes forever, and placed entirely beyond the power of legislative or other control, save in accordance with the objects intended in their selection and dedication. No lot is liable to taxation for any purpose, nor can a lot be sold under execution, or by order of any court, or in



MAIN ENTRANCE, BELLEFONTAINE CEMETERY.

any way conveyed, after interments have been made in it, out of the family of the original proprietor, except as provided for by Section 5 of amendments to the charter, approved March 19, 1866, which allows a sale of a lot two years after the dead have been removed.

Calvary.

Calvary Cemetery, the leading Catholic burial ground of St. Louis, was opened in April, 1854. It contains 475 acres, of

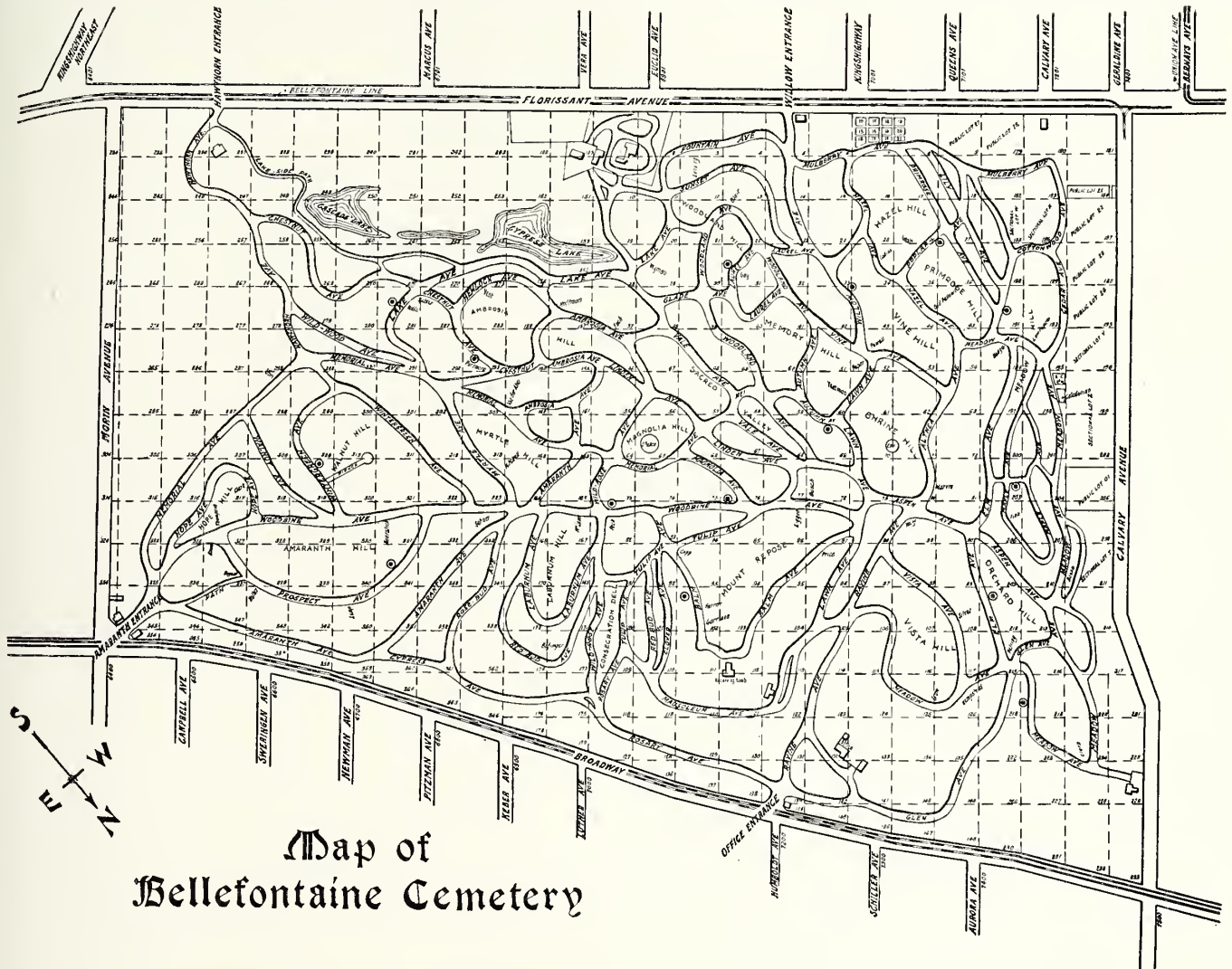
\$7.50 for eight-foot graves. The annual interments number over 3,000. Total interments to date are 110,000. The total number of lots sold to date is 16,500.

There are eight private telephone stations on the grounds communicating with the office. The business of the grounds is greatly facilitated by these phones and also by bell signals from a tower, 60 feet high, operated by an electric bell ringer. This tower is shown in one of our illus-

tratively, and it is expected that they will be duly appreciated and complied with. People ought not insist on bringing their national customs and prejudices into our modern cemeteries. We meet here on common grounds, and expect all to conform to established customs in cemetery matters.

Cemeteries are conducted on one general plan, dictated by experience and educated taste. Individual rights must be subordinate to this plan, if we are to have harmony and taste prevail in the cemetery. If the cemetery officers were consulted, the lot owner might learn what was the prevailing custom in the best class of cemeteries, and thus avoid great mistakes in the management of his lot.

Introducing tin boxes, shells and other unsightly



Map of
Bellefontaine Cemetery

Water Hydrants Indicated by ©

Scale - 1 inch = 400 Feet

which 300 are improved. The surface is beautiful rolling hill and valley land with good, rich soil.

The cemetery is managed by a board of thirteen trustees, of which the Archbishop of St. Louis is chairman. It is organized under the laws of the state of Missouri and is exempt from general taxes, but must pay all special taxes for street improvements, sewers, etc., within prescribed districts. The cemetery has eleven miles of roadway, office buildings and gate lodge on Florissant and Calvary avenues, and a gate on Broadway.

About 200 lots are under perpetual care, paid for from interest on endowment fund subscribed for by lot owners. The price of ground ranges from 50 cents to \$2 per foot; single graves from \$6 to \$10; \$5 is the charge for digging six-foot graves,

trations. The greater part of the work on the grounds is directed by these phones and bell signals. The principal roads are oiled to keep down the dust, to kill weeds and keep intact the surfacing of the roads from the action of water during rains. This plan has been found very effective.

Calvary issues a very handsome illustrated book that contains some interesting suggestions to lot owners, from which we quote as follows:

Lot owners should secure ample ground for their families when they first purchase a lot. Even amongst the poorest, this can be done if extravagance in funerals and useless stonework is avoided. Burying one's family or friends in single graves or small lots is a mistake, as it is almost invariably followed by removals to new lots, which is incurring unnecessary expense, besides the very disagreeable task of removals.

Cemetery rules have been formulated, after due consideration and long experience, for the benefit and guidance of lot owners, both individually and col-

lectively, and it is expected that they will be duly appreciated and complied with. People ought not insist on bringing their national customs and prejudices into our modern cemeteries. We meet here on common grounds, and expect all to conform to established customs in cemetery matters.

All lots should be placed in charge of the Cemetery Association, in perpetual care, if the family can at all afford it, so that when the members of the family pass away, the lot may be cared for, as the Cemetery Association will prove the most interested of caretakers for the sake of the general good appearance of the cemetery. This is made a rule in nearly all of our modern cemeteries.

DON'TS TO LOT OWNERS.

Don't buy lot in partnership, as it too frequently leads to unseemly misunderstandings.

Don't bury your family in single grave lots; use economy in your funeral expenses and you can buy a lot.

Don't buy lots from parties outside the Cemetery Association, for you are very apt to have an invalid title.

Don't think that rules were made only for the poor; they are equally applicable to the rich.

Don't think that you can introduce your old-fashioned customs and prejudices into the modern cemetery. Leave those at home.

Don't think that it is a good thing to break rules and avoid conforming to them. It is much more graceful, and shows better breeding, to observe them,



SUPERINTENDENT'S OFFICE, BELLEFONTAINE CEMETERY.
Built about 1850.

Don't think that the cemetery management wishes to see your lot neglected; they are the most interested parties, after yourself, in seeing it taken good care of.

Don't employ incompetent undertakers, as they make many mistakes, and then try to blame the cemetery management.

Don't copy the next lot owner's designs; try and get up something different and new.

Don't put unsightly shells, tin cans, or other unsightly objects on the graves. They are a sign of ignorance.

Don't forget to have your lot top dressed with suitable top dressing in the late fall or winter.

Don't neglect to have your lot placed under perpetual care, if you can at all afford it.

Don't be putting walks in your lots, they are absurd for such a small space; an unbroken lawn looks best.

Don't leave your horses unbitched; they graze on and break down the borders. This looks very unseemly.

Don't have so much prejudice to trees near your lot. The foliage and shade that God has provided have always a genial influence.

Don't think it below your dignity to study our modern cemeteries. There is a great deal to learn from them.

Don't avoid the cemetery; the thoughts it suggests are very wholesome, and may lead you to think of saving your immortal soul.

The officers of the Calvary Cemetery Association are: President, Most Rev. John J. Glennon, D. D.; vice-president, W. J. Kinsella; treasurer, Joseph Gummersbach;

secretary, F. J. Casey; superintendent, Matthew P. Brazill.

The following extracts from the Calvary Cemetery rule book will give some idea of the careful attention given to modern ideas of cemetery management:

The joint ownership of lots of 400 square feet or under is prohibited. Said sized lots will not be sold or deeded to more than one person. The subdivision of these lots by the purchaser will not be acknowledged.

Lot owners are not allowed to cut down trees or trim them in any way; if trees need trimming the case should be reported to the Superintendent. A charge will be made for cutting down and hauling away remnants and rubbish.

Should any tree or shrub situated in any lot become, by means of its roots, branches or otherwise, detrimental to the adjacent lots, or avenues, or dangerous or inconvenient to pedestrians, it shall be lawful for the Superintendent to remove such tree or shrub.

No hedges or enclosures of any kind around lots or graves are allowed. Lot owners who desire fences and copings removed, can have same done free of charge, and the lot left in good condition, the Cemetery retaining the old material.

No iron or wire work, and no seats and vases, will be allowed, only by special permission; and when any article made of iron begins to rust, the same shall be removed from the ground. Boxes of tin, zinc or sheet iron will not be allowed on lots or graves.

Mounds over graves shall be kept low, not exceeding four (4) inches in height.

No vault will be permitted to be built unless the designs for the same are exceptionally good and the construction is solid and thorough. The designs must be submitted to the Trustees, and will not be approved, unless, in their judgment, the structure will be an ornament to the Cemetery.

All foundations will be built by the Association. Foundations for monuments must be as deep as the grave.

Foundations for headstones, in single grave lots, must be at least three feet deep.

Foundations in all cases must be of the same dimensions as the base it is to carry.

No headstone exceeding three feet high, including base, will be allowed in single grave lots.

All headstones over two feet six inches and under three feet must be three inches thick; all under two feet six inches must be two inches thick in single grave lots.

Only stone or real bronze headstones or markers will be allowed. Composition of any kind prohibited.

Headstones or monuments in single grave lots must not exceed eighteen inches square at the base.

Composition of any kind is prohibited.

All designs for stone work must be submitted to the Superintendent for approval before any foundations will be built.

The number of gardeners allowed to do work in the Cemetery will be limited by the Board of Trustees, and each gardener must have a permit or license to do business in the Cemetery from the Board of Trustees.

SS. Peter and Paul Cemetery.

SS. Peter and Paul Cemetery was opened in April, 1864, and was therefore fifty years old last April. The total number of burials up to that time was 38,655. During the first year there were interred 464, and during the fiftieth, 1,150. The total number of lot owners totals 5,050. The area of the cemetery is 85 acres, of which 70 are in use. Of roads there are 25,000 lineal feet, with an average width of 16 feet. The sewers total 8,336 feet. The water system includes 3,700 feet of piping and there are 7,883 feet of concrete gutters.

The chapel, which is illustrated here, is a handsome classic structure located on the main drive, 340 feet from the entrance, and was erected at a cost of \$8,000. The receiving tomb is a remodeled family vault and has room for twelve bodies. The cost of erection was \$1,500. The grounds are mostly rolling and of clay formation, with some level areas.

The cemetery maintains its own nursery,



TERRACE AND WINDING ROAD, CALVARY CEMETERY.



CLEANING WEEDS FROM LAKE, CALVARY CEMETERY.



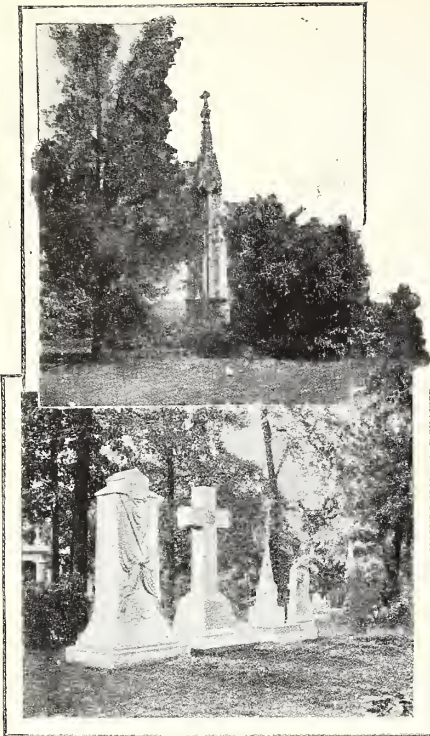
FLORISSANT AVENUE ENTRANCE TO CALVARY.



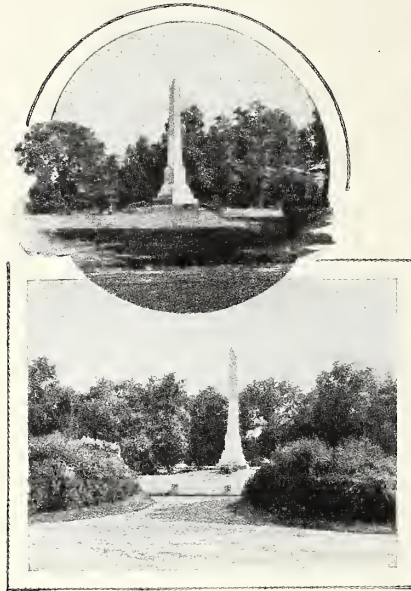
BROADWAY ENTRANCE TO CALVARY.



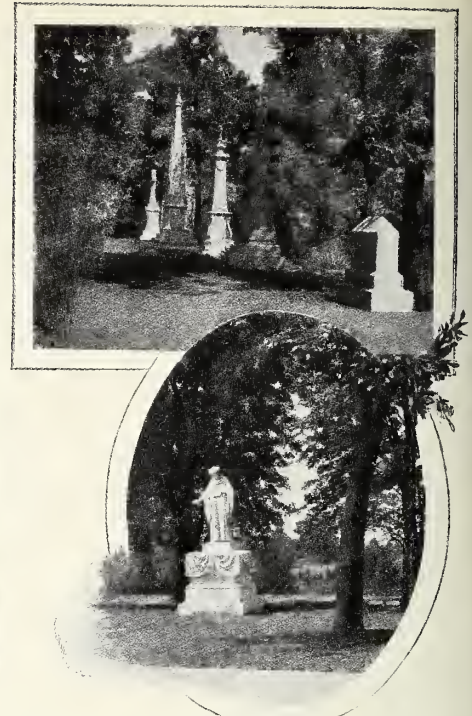
VIEW IN SS. PETER AND PAUL CEMETERY, ST. LOUIS. CHAPEL, SS. PETER AND PAUL CEMETERY.



Upper Picture, Walsh Lot.
Lower Picture, General Sherman Lot.



Two Views of Lucas Lot.



Upper Picture, Mullanphy Lot.
Lower Picture, Patterson Lot.

SOME WELL PLACED MONUMENTS WITH FINE LANDSCAPE BACKGROUNDS IN CALVARY.

which was started in 1910 and now contains 2,350 trees and shrubs. In 1908 the old records were rewritten and Haight's system of record keeping installed. Since 1912 no mounds have been allowed in newly platted sections. The platting of the old part was done by an architect. Since 1905 A. E. Todt, the present superintendent, has been intrusted with this work.

One of the views of the cemetery shown here was taken from the top of a windmill which gave the cemetery its water supply up to 1912, when they procured connection with the city water system.

Following are the officers of the cemetery: Most Rev. J. J. Glennon, Archbishop of St. Louis, owner; Rev. Hy. Groll, SS. Peter and Paul Parish, manager; A. E. Todt, superintendent; Rev. Hy. Groll, president; Rev. J. Stevens, treasurer.

In a recent circular issued to the lot owners, Superintendent Todt gives some good advice on two important matters that will be suggestive to other cemetery managers. We quote as follows:

It has been held by some courts that a family burial lot does not ordinarily pass by the residuary clause of a will, but descends to the owner's heirs. So it is advisable that a lot should be specifically devised if the owner desires to dispose of it by will and not have it descend to his heirs; but no one except the original purchaser of a lot should attempt to dispose of it or grant interment rights therein by will or otherwise, without consulting the rules of the Association, or conferring with its Secretary, as it is probable that one who has inherited the lot will find that his rights are so restricted that it is not possible for him to dispose of it or grant rights therein; and even the original purchaser should remember that his rights in a cemetery lot are subject to regulations and may not be absolute, and therefore it would be advisable for him also to confer with the Secretary, or consult the rules and regulations of the Association before disposing of it or granting rights in the lot by will or otherwise. When a lot owner dies, leaving descendants or collateral heirs, the widow or



THE BELL TOWER, CALVARY CEMETERY

widower of the owner inherits only a right of interment in the lot, which right is forfeited by remarriage.

Another matter which we particularly wish to call to the attention of the lot owners is the care, or rather lack of care given to the Deed. The Deed of your cemetery lot is a paper which is equally as valuable as the Deed of your home, and should always be in a safe and convenient place. It is absolutely necessary that the Deed be shown when an interment is to be made on a lot, and thus it frequently happens that an unnecessary and disagreeable delay is caused by the Deed being misplaced.

Following are some extracts from the rules of SS. Peter and Paul:

Enclosures of all kinds, around lots or graves are prohibited, whether of hedges, coping or anything else; nor will shells, rusty wires, boxes, metal, wreaths, glass globes or any wood work be allowed.

Iron seats will be allowed only by permission of the Superintendent, but will be removed at once if they begin to show rust.

Owners may plant shrubs on their lots, with permission of the superintendent.

Trees or shrubs, growing in any lot can only be trimmed or cut down by the cemetery employees.

Corner posts must be set flush with the ground and at least eighteen inches deep, and no less than eight inches square.

Double headstones embracing two or more graves will not be permitted. Nor are entrances allowed. No grave mark or memorial of any kind, can be set in a socket.

Granite and standard bronze are recommended as the best and most durable material for memorials.

Limestone, soapstone, sandstone and any composition are considered unfit for such purpose, and will not be permitted.

All monuments and memorials, except marks having an eighteen inch butt, must be set on foundations of the same dimensions as the bottom base of the superstructure and at least six feet deep, and in all other respects cemetery rules for monumental work shall be strictly complied with.

Persons desiring to erect a mausoleum must submit the plans to the superintendent, and if in his judgment he does not find it practical or an ornament to the cemetery, the erection of same will not be permitted.

No monument, vault, mausoleum or other similar structure may be built on any lot, unless complete plans and specifications for same have been submitted to the superintendent, and approved by the manager.

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PARK NEWS.

Zentaro Kawase, professor of forestry at the Imperial University of Tokio, has been making a tour of the national forests of this country to learn the government's methods of selling timber and of reforestation.

More than 858,000 young trees are being set out this spring on national forests in Utah and southern Idaho, and the season is reported as particularly favorable to their successful growth.

Armstrong Lake, within the Beartooth National Forest, Montana, is said to rival the famed Lake Louise of the Canadian Rockies. It lies at an elevation of 7,000 feet, surrounded by towering mountains. A good road which can be traveled in half a day by automobile connects it with the railroad at Billings. A rustic hotel has recently been completed and many trails make the surrounding region accessible.

Lincoln Park, Chicago, is to have a handsome band stand, Lorado Taft, the sculptor, being interested in the design. It is intended to be a permanent structure and will cost about \$200,000.

The South Park Commissioners of Chicago are planning to improve Grant Park with several interesting landscape and sculptural features. Daniel C. French's "Republic" in bronze, the stately figure that was originally made for the World's Fair and afterwards stood in the lobby at the Art Institute, will be placed in this park.

At a recent meeting of the Park Commissioners of Buffalo, N. Y., several complaints were laid before the board regarding band concerts given in that city, but no action was taken by the board. Contracts were awarded for draining the forest bureau nursery at Orchard Park, for an iron fence along Scajaquada Creek at Delaware Park and for the plumbing in the wading pool at Hennepin Park.

Mayor Bridges Smith, of Macon, Ga., will soon name the tree and park commission for that city. The council has decided that there shall be eight persons on the board, composed of four ladies and four men. It will be the duty of the tree and park commission to look after the necessary improvements on the parks and playgrounds.

Members of the City Park Board, of Dallas, Tex., are discussing the question of asking the city government to turn over to the board for park purposes all of the land owned by the city at White Rock not covered by water from the reservoirs. The committee will soon have plans ready for bids on the construction of the shelter house and comfort stations in Summit

Play Park. Plans are being prepared for the building of a fireproof neighborhood house in Trinity Play Park. Work will be begun soon on the construction of two public comfort stations in City Park. A committee of citizens has asked the city to buy Woodchuck Hollow for park purposes.

New Parks and Improvements.

Mayor Campbell plans to more than double the size of Sam Houston Park, of Houston, Tex. The City Council has authorized the purchase of about two acres of land for a sum of \$20,000. Plans for the beautification of the playground have not been completed.

The park belonging to the Kansas City Southern Railway located in Port Arthur, Tex., will be beautified and improved.

The City Park Board of Dallas, Tex., purchased a lot 50x130 feet fronting on Grand avenue, at a cost of \$6,000. This will be added to Fair Park.

At the annual meeting of the Park Commission of Colorado Springs, Colo., the following officers were unanimously elected: D. V. Donaldson, president, and A. G. Sharp, vice-president. J. B. Lang was appointed superintendent, and R. P. Van Hook, assistant secretary.

A bill is now before Congress appropriating 7,000 acres of government land for Denver's mountain park system.

At a recent meeting of the citizens and property owners of Paris, Tex., plans were recommended for a circular boulevard around the city and for a park adjacent to the old city cemetery.

The committee on municipal affairs of the Galveston Commercial Association is trying to secure a site for a new city park.

A beautiful suburban park will be established jointly by the Park Board and Library Board in the grounds surrounding the Oak Cliff branch of the Carnegie Library at Oak Cliff, Tex. Two thousand dollars has already been turned over to the Park Board for this improvement.

Three deeds for property which will be added to park sites in Dallas, Tex., were recently bought at about \$21,250.

Mayor Bell and members of the Board of Park Commissioners of Indianapolis, Ind., recently viewed the south side of this city for prospective park sites.

New Parks and Improvements.

Sam Helinger, who opened the Heliger addition to Heber Springs, has donated a large plot of ground in his addition to this city, to be made into a public park.

The bill for the creation of the National Park of the Cliff Cities is to be pushed for passage in Congress soon, but the proposed

area is to be cut down more than one-half because of the objections of the forest service. The redrafted bill is to include in the parks the lands west of the Rio Grande from the Santa Clara to the northern boundary of the Canada de Cochiti grant and westward to the western boundary of the Ramon Vigil grant.

Members of the City Park Board, of Dallas, Tex., have looked over a tract of five and one-half acres, comprising part of the grounds of St. Mary's College, which has been offered to the board as a park site. The price asked is \$40,000. An offer has been submitted to the board to sell five acres situated near the paper mill in Oak Cliff as a site for a negro park. The price is \$4,500. The board is contemplating the purchase of property on Prairie street and Elk drive for park purposes. A deal has been pending for some months for the purchase of twenty-six acres of land at Turtle Creek and Maple avenue, which has been submitted for park purposes.

J. Harry Cross, chief park engineer of the city of Baltimore, has been engaged by the Roanoke Park Commission to design and improve the parks of the Magic City, and will begin work soon. F. Fallcn has donated 5,000 Norway maple trees to be planted in this park.

Plans for the transformation of the Ex-all Park tract at Bryan, Live Oak and Adair streets, Dallas, Tex., into a combined play park for the children and a beauty spot for the public generally were received by Mayor W. M. Holland from George E. Kessler, landscape architect, of Kansas City.

THE COVER ILLUSTRATION.

The illustration on the front cover of this issue shows the handsome entrance gates to the United Jewish Cemetery, Walnut Hills, Cincinnati. The Jewish Cemetery is one of the most beautiful modern cemeteries in the state and is not lacking in any improvement that would tend to add to the attractiveness of its natural scenery. The main stretch of fence used in connection with these entrance gates, but which is not very well shown in our illustration, comprises some 2,000 feet and sets on Bedford stone coping. A splendid picture of this was shown in the March, 1913, issue of PARK AND CEMETERY. It was all made and erected by The Stewart Iron Works Co., Cincinnati, O., and is a style of fence that is especially appropriate for cemetery purposes, making a very imposing and substantial enclosure. It embodies in its construction their patented three-rib steel channel rail, adjustable line post, center support, and many other specially desirable features which distinguish the products of The Stewart Iron Works Co.

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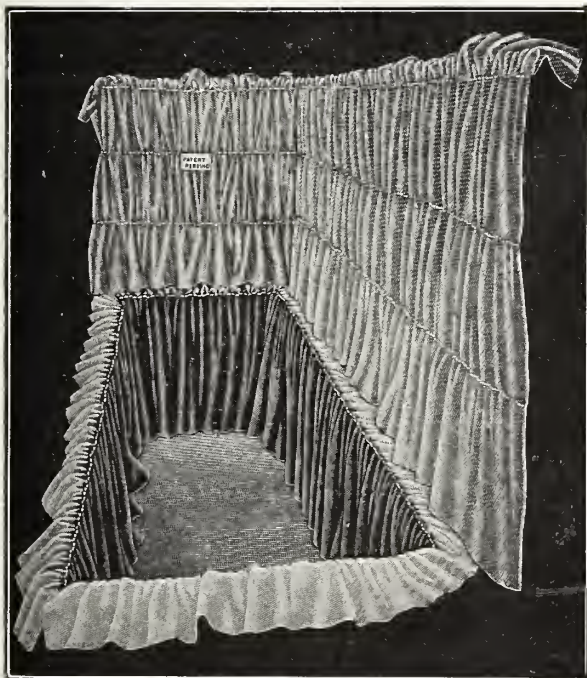
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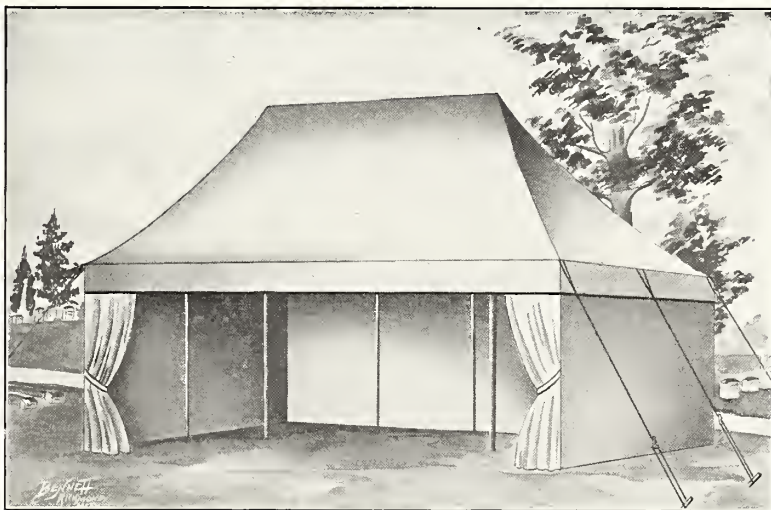
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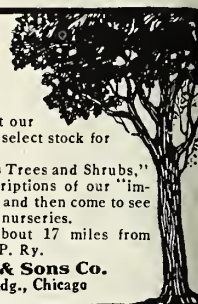
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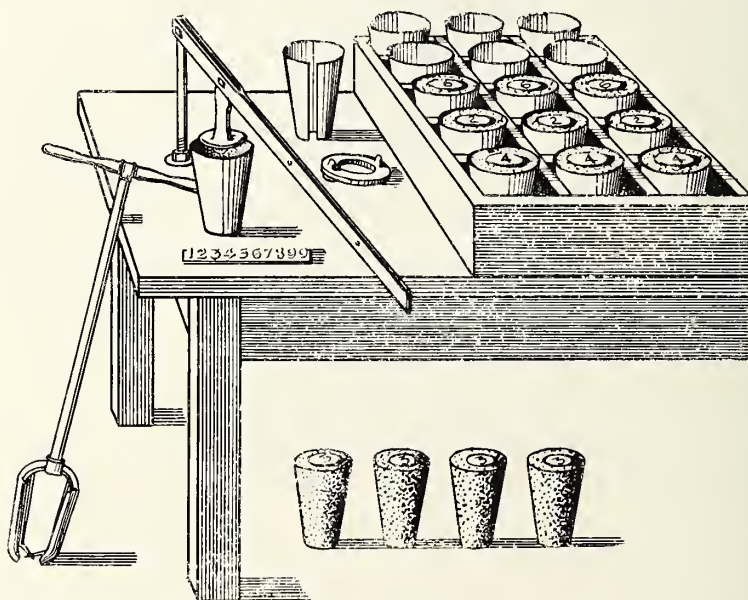
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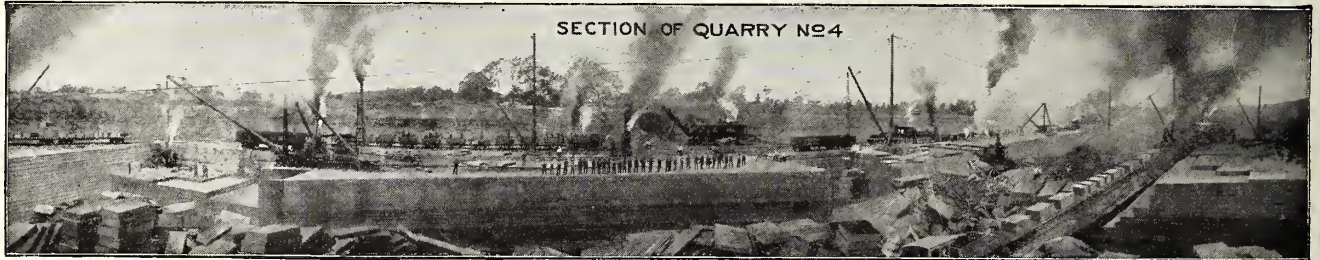
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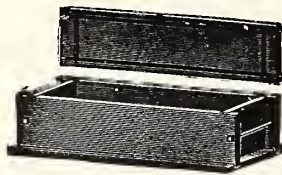
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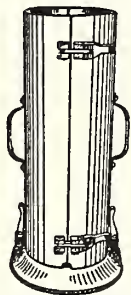
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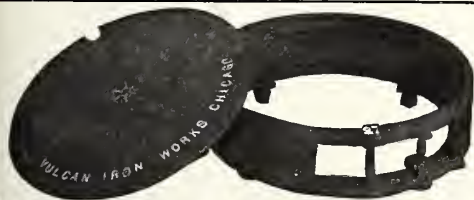
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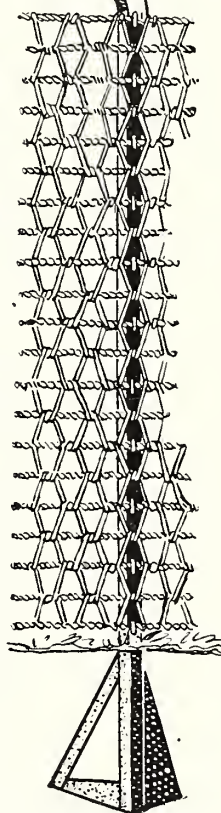
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Vol. XXIV., No. 9 NOVEMBER, 1914

SPECIAL FEATURES IN THIS ISSUE

Fine Chapel and Crematory in Forest Lawn, Omaha— Pictures in Park Cemeteries— Andrew Jackson Downing, Pioneer Landscape Architect— Modern Crematory Retort Construction— Types of Cemetery Gates and Entrances— Park Publicity in Kansas City



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Iron Entrance Gateway and Fence.
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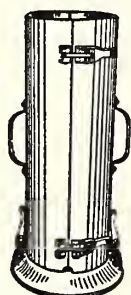
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EDITORIAL

NOVEMBER, 1914

VOL. XXIV No. 9

Enlightened Park Publicity

The description on another page of the new souvenir book recently issued by the Park Board of Kansas City should be read by every park officer, for it offers a valuable lesson in enlightened park publicity. Instead of the customary elaborate annual report issued by many park boards, the Kansas City idea is to furnish a smaller but just as handsomely printed illustrated book that serves as a guide to the park system. A summary of the chief facts about each park and a brief description of each one is given in ready reference form, and with the numerous small illustrations the book presents in very interesting form a moving picture

account of the park system. Detailed itineraries for one, two and three hour trips through the parks are also given as guides to visitors. This latter is a most useful feature, not only for strangers in the city, but for the home folks as well. It is astonishing how little actual knowledge of the parks the average citizen has, and this little book is destined to do a valuable work in getting the people more intimately acquainted with their parks. Every park superintendent should get one of these books and try to develop something of the kind for his own park system.

The Complete Cemetery Landscape

No more varied work in landscape gardening, landscape architecture or landscape construction can be found than the development of the modern lawn plan cemetery. The problems of planting to set off the memorials and buildings on the grounds; the making of lawns; tree planting and ground covering; the development of landscape pictures that rival those of the parks and forests, make the work of the cemetery landscape architect an all-round experience in developing land for both utility and beauty. The relation of the architectural features to the cemetery landscape, and the harmonizing of the utilitarian structures with their environment, demand the highest attainment of the landscape

architect and cemetery engineer. In last month's and in this month's issues of PARK AND CEMETERY have appeared some unusually helpful and authoritative discussions that embody in an unusual degree the fundamental principles underlying all of these various phases of landscape development. Mr. Currie's "Monuments and Other Memorials," Mr. Simonds' "Ground Coverings," in our last October issue, and Mr. Noyes' "Pictures in Park Cemeteries," embody in effect a compendium of cemetery landscape development. These three addresses should be read and re-read and studied each in relation to the other by every progressive cemetery executive.

National Park Work and Civic Advance

The American Civic Association in sending out the notice of its annual convention calls forcible attention to the valiant work that must still be done to hold Niagara against the advances of commercial attack. The association is also pledged to the effort to secure a national parks service to make possible the largest administration and extension of our national recreation areas. The annual meeting of this organization is planned to be of much value to national park improvement and general civic advance. It will be held in Washington, D. C., December 2, 3 and 4. The tenth annual convention will be made a special anniversary occasion, with an unusually strong program. It is proposed to have this year, as an incident of the celebration, an anniversary dinner on

Thursday, December 3rd, which shall be a brilliant affair in point of distinguished speakers and attendance. Special subjects for consideration in the program will be City and Town Planning; National Parks, Niagara Preservation, City and County Parks, Neighborhood Improvement, and kindred subjects. Suggestions for other subjects and proposals of competent speakers to present them are invited. In every way the next convention is to be a most notable one, from which shall go out a message of inspiration for achieving finer civic conditions in America, and for a larger and more zealous appreciation of our national possessions of scenic grandeur.

Heredity in Tree Culture

Foresters of the United States are interested in the announcement recently made by the American Genetic Association that two prizes of \$100 each have been offered for two photographs—one of the largest tree of nut-bearing variety in the United States, and one of the largest broad-leaf tree which does not bear edible seeds. In the first class, for example, are included trees such as chestnut, oak, walnut, butternut and pecan; and in the second, trees such as elm, birch, maple, cottonwood and tulip poplar. No photographs of cone-bearing trees are wanted, since it is definitely known that the California big trees have no rivals among conifers. At a later time the association may take up the same question as between the various kinds of conifers, as pines, spruces, firs, cedars and cypresses.

The purpose of the competition, as stated by the association, is to find out in what regions the native trees attain their largest growth and under what conditions they thrive best. When these large trees are located and the measurements authenticated, the association hopes that it may be possible to secure seeds, cuttings

or grafting wood from thrifty trees in the region where they grow, to see whether finer specimens may be propagated in other parts of the country. It is hoped in this manner to get some particularly choice strains of native trees established in regions where good specimens are not now found. It is assumed by the association that seed from the region where the largest trees grow ought to produce larger and stronger trees than from regions where only small trees are found. By finding out where the large trees are and then planting seeds from them in other locations, the association hopes to demonstrate the practical value to horticulture and forestry of the laws of heredity. The announced purpose of the Genetic Association is to bring about the dissemination of seed or stock of the best specimens, when found, to demonstrate, if possible, the value of heredity in tree growing. The contest for the \$100 photographs is announced to end on July 1, 1915, on which date, says the secretary of the Genetic Association in Washington, D. C., the offer will terminate.

PICTURES IN PARK CEMETERIES

An address before the St. Louis Convention of the Association of American Cemetery Superintendents, by John Noyes, Landscape Gardener, Missouri Botanical Gardens.

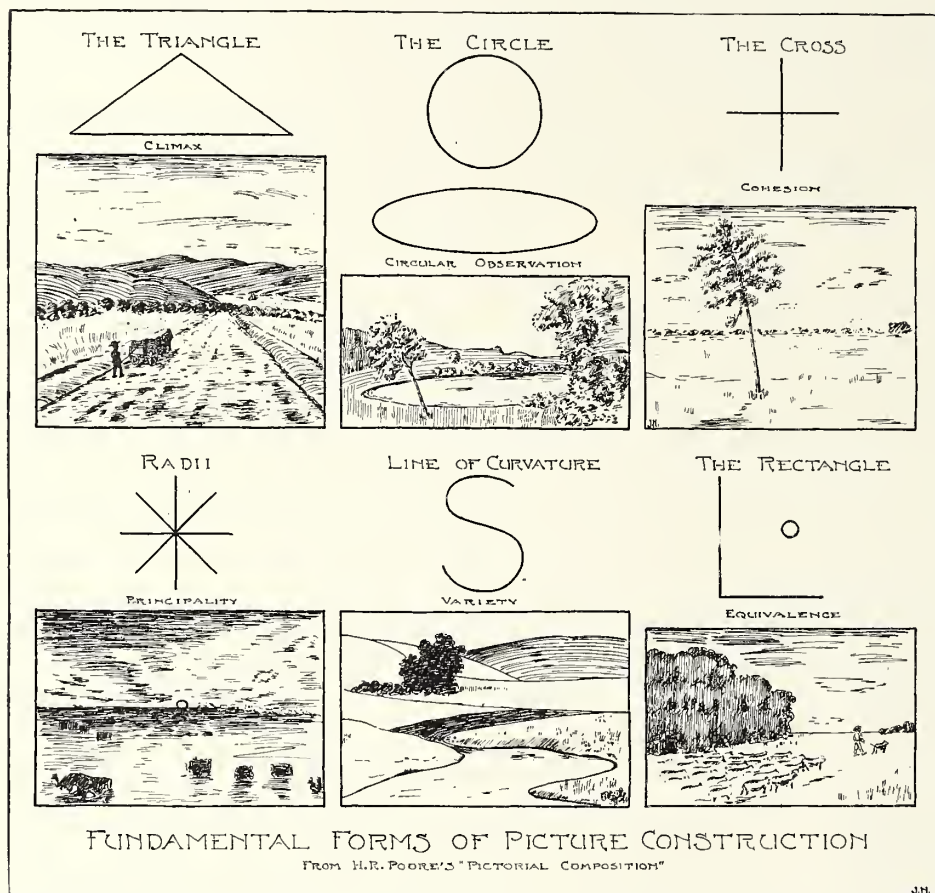
I have often been impressed with the unusual opportunities offered by cemeteries in general, for the creation of views. In a few of the cemeteries that I have had the

make fine photographic pictures, but in reality are unattractive because of the ill-kept lawns, the ragged road edge or the unhealthy condition of the plantings. This

certain rules of composition. I will elaborate on these three headings as I come to them.

First, however, let us review briefly the principal materials that compose the views in our park cemeteries. These are the sky, the plantations (trees, shrubs, etc.), the lawns, walks and drives, the structures (chapel, mausoleums, monuments, etc.), lakes and ponds, brooks and rivers, light and shade, and atmospheric conditions. All of these so-called materials are more or less controllable except the sky, the atmospheric conditions and light and shade. In good landscape design, every problem is dominated to a certain extent by a motif or theme. In a park or private estate it may be anything—a building, a grove of trees, a stream, an old quarry, or even a building material. And so in a cemetery there should be a pervading theme, and this probably would be the structures, the chapel perhaps the most dominant, and the lesser structures of varying importance. Therefore in a majority of views one or more structures would show. Usually by far the greater part of the view will be composed of lawn (or perhaps a body of water in place of the lawn), foliage and sky.

Returning again to the classification of "Views" proper, let us consider first the unframed, distant, panoramic view, such as we get from an eminence looking across a valley, or the view from any point where the principal objects are in the distance, the foreground being comparatively unimportant. Here several monuments may be seen. If some are ugly, hide them with plantings. A suggestion of a building is usually better in a view than the whole, and here, too, merely showing a hint; in



pleasure of looking over, these opportunities have been recognized, and many beautiful views have resulted; but in others, too numerous to mention, the few really attractive views are apparently entirely accidental. The so-called park cemeteries of today, of course, present the best opportunities. This is true principally because of the restrictions imposed on the numbers of monuments allowed (and the approval of their design and size), and the restrictions on the plantings, the general maintenance, etc. Obviously, the fewer monuments in a view the better, and the more attractive they are then the more chance for a pleasing ensemble.

The ideal cemetery is a memorial park and it should also be a gallery of beautiful views and pictures, a place where all the people of the city and visitors to the city should go as quickly as they would go to the art museum to see the famous paintings. The really fine cemeteries are usually better maintained than the city parks, and no matter how well designed the latter may be, the park cemetery will usually present the greener lawn and the better kept plantings. Many views in our best parks present all the essentials of good pictures,

is not an arraignment of park management in any way. The condition of our parks is usually the unavoidable result of allowing the people to tramp at will over every available square foot of park land. This is necessary and commendable. We cannot place "Keep Off" signs all over our public parks, and design and maintain them only for beautiful views. In a cemetery we can do this to a limited extent at least; we do not have the immense crowds that frequent the public parks, and those that do come can be made to obey the rules. Again, the size of openings in parks is usually governed by practical necessity, while in the cemetery they may be governed principally by aesthetic considerations, giving the designer an opportunity to have his views almost as he wants them.

In this discussion, I will consider briefly the analyses of the pictures to be seen in the ideal park cemetery. For convenience, I will deal with the analyses under three headings—Views, Vistas and True Pictures. "Views" here will be a general term, including all ordinary views that one would get in a park cemetery, whether distant or near. "Vistas" will refer to narrow views and "True Pictures" to views that obey



VIEW FROM OFFICE STEPS, MOUNTAIN VIEW CEMETERY, OAKLAND, CAL.



LOOKING ACROSS WILLOWMERE, GRACELAND CEMETERY, CHICAGO.
An Attractive Vista with Mausoleum as Center.

other words, a small part of the monument or mausoleum is preferable to showing the whole. Foliage and monuments should present a pleasing ensemble, and the sky line, usually undulating, perhaps should be punctuated by an obelisk or other tall monument. Monuments that may occur in the foreground or middle ground should be hidden by plantings, or made conspicuous, depending on their importance and their value to the general scheme.

Nearby views present a different problem. This applies to short range views that are seen from the drive or walk, as, for example, the view that one gets of a single lot with its monument. There are thousands of such views in cemeteries and all may be made attractive and different, provided the structure is not too ugly. A fitting background of foliage to the monument, and joining it by proper grading and planting to the surroundings, enables the designer or superintendent to make these

very attractive and distinctive. Here again, if another monument breaks the scheme, plant it out. Some of these views may be treated as surprises; others made conspicuous from the road or walk at a distance—features that hold the eye and increase the interest as we come nearer to them.

There are many beautiful views where monuments and other structures are entirely absent, in park cemeteries. These are found especially on sections where monuments are not allowed, and in ravines and lowlands. Many of the curves along the

walks and drives also offer such views as these. The more there are of these the better, for variety if for no other reason.

Long distance views to bits of landscape perhaps miles away from the cemetery are wonderfully attractive and every opportunity to secure such views should be seized. The axe is too little used in park cemeteries, as well as in some parks. Many times the removal of a few needless trees will open up a beautiful vista to a distant countryside.

In this discussion of views let us not forget those from the outside looking in. While it is perhaps desirable, in most cases, to border the cemetery with plantations to shut off the immediate neighborhood, it is often possible to leave gaps in this border planting, thus opening up views to the interior which will give pleasure to the passerby.

"Vistas"—narrow views of varying lengths—are too seldom found in park cemeteries. What I have special reference to are the vistas that are cut straight through the woods to open up views to some object of importance, or to some distant view. They usually require an important terminus, and what could be better than an attractive monument or mausoleum of the right proportions? It is usually possible to hide, by planting, monuments at the side which may interfere with the effect. These vistas may be especially effective if planted in solid colors. I have in mind a private estate in Massachusetts where this theme was followed with wonderful results. There were rhododendron vistas, azalea vistas, kalmia vistas, forsythia vistas and others. These could easily be duplicated in park cemeteries. Nor need we depend on the one type of shrub for effect,



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THE CHAPEL GROUNDS, GRACELAND CEMETERY CHICAGO.
A glimpse of the building may be seen behind the tall tree in the center.



WATER PICTURE IN KENSICO CEMETERY, NEW YORK.
A Vista with Monumental Structures in Center.

for a later display might be presented with annuals or perennials.

We now come to the so-called "True Pictures." I call them "True Pictures" here for emphasis. To most of us a picture means anything from the most amateurish drawing or painting of a landscape to a photograph of the town baseball nine, but to the artist a picture is something different. To him a painting or photo is not a picture unless it obeys certain rules of composition and unless it shows a certain balance of units. Every unit has a definite value in the picture and the importance of the unit depends on its position. H. R. Poore in his book, "Pictorial Composition," gives six fundamental forms of composition, the triangle, the circle, the cross, radii, the line of curvature and the rectangle, and I have endeavored to reproduce on the blackboard his illustrations of these six forms. The triangle form is illustrated by a long, straight road in perspective, terminated in the picture by a row of hills. The circle form is illustrated by a bit of scenery in which a pond or lake

forms the important part. Strong vertical lines in contrast with equally strong horizontal lines, as a lone tall pine in a desert, illustrates the cross form. All the lines converging to one principal object typifies the radii form. The line of curvature is illustrated by the rivulet meandering through the main part of the picture, and the rectangle form by the distant landscape framed by a mass of foliage in the foreground and at the side. Balance is illustrated to a certain extent in these sketches, too.

You may find pictures in park cemeteries similar to any of the aforementioned forms, and you probably recall many views that approximate them. Actually, though, true pictures in nature are comparatively rare. The artist, Whistler, once said: "Nature is usually wrong; that is to say, the condition of things that shall bring about the perfection of harmony worthy a picture is rare and not common at all." Many times, therefore, a landscape painter will add same feature to the canvas that does not exist in the scene, to get the right balance and composition. Supposing the scene to be in a park cemetery and the feature added, a tree, a building, or perhaps a monument, could we not make the scene a true picture from that point where the artist sat if we placed that tree, building or monument in the same relative position that it occupied in the picture? If the artist depended on form for his composition we could; if he depended on coloring, perhaps not.

There is no question, however, that we can get nearly true pictures in our park cemeteries, from certain viewpoints, by using the right methods; and, of course, we may find many that already have all the



THE UPPER RESERVOIR, LOOKING FROM UPPER DAM, MOUNTAIN VIEW CEMETERY, OAKLAND, CAL.
A Fine Example of the Distant View Type of Picture.

essentials. It will take some study to locate them usually and still further study to improve them. Many ordinary views might make very good pictures with a little additional planting in the foreground, and many vistas have all the principles of good composition.

Many times it is necessary to specially treat the viewpoints so that the visitor will get the best views in spite of himself. All views are more attractive from certain points than from others, and a picture is seen at its best from one single spot only. Ordinary viewpoints could be marked by openings in roadside shrubbery, by benches fastened to face in the direction of the good view, by bays in the walks, by summer houses and by other methods. A true

picture might have to be marked by a sudden turn in a narrow walk, by a platform or the bench again. The true Japanese garden has its Perfect View Stone, its Sunset Stone and others, specially located for certain effects, and in touring the garden a special route is supposed to be taken. Now, in my ideal cemetery, I will have just such stones and I will recommend routes for certain times of the day, and even, perhaps, have a guide for pointing out these views for the stranger.

The design of the cemetery is usually left to a landscape architect, but probably in most cases his connection ceases with the completion of the construction work, and from this point the superintendent takes it up. The landscape architect has

undoubtedly carefully planned his views and vistas, but a group of trees planned for this spot may die, another group may develop far beyond expectations, and so it goes. With such an uncertain quantity as trees and shrubs, the best of intentions sometimes produces indifferent results. So the superintendent must first get in thorough sympathy with the ideas of the landscape architect, so that he may complete these ideas; but besides all this, he must keep his eyes open for other opportunities that arise as the cemetery develops. In short, I would have you add to your accomplishments as engineers, horticulturists and business men, a bit of the artist. You will enjoy your cemetery a great deal more and will be bound to improve it.

OMAHA'S NEW MODEL CHAPEL AND CREMATORY



NEW CHAPEL CREMATORY AND RECEIVING VAULT, FOREST LAWN CEMETERY, OMAHA, NEB.
Front of Receiving Vault Behind Shrubs at Right.

No finer building for its purpose has yet been erected in this country than the new chapel, crematory and receiving vault just completed in Forest Lawn Cemetery, Omaha, Neb. In the architectural beauty and landscape setting of the exterior; in richness of interior decorations; in permanence and in convenience of equipment for its threefold use, this building stands unique in cemetery architecture.

The structure stands on a rise of ground facing the main entrance drive, and the site has been improved by skillful landscape treatment in keeping with its character.

The architect has been rarely successful in the stately, classic design for both exterior and interior. His treatment of the decorative features of the interior—in detail, in color scheme and in the selection of materials—has been especially effective. The harmonious combination of marble, mosaic, ceramic and stained glass has produced a warm effect unusual in buildings

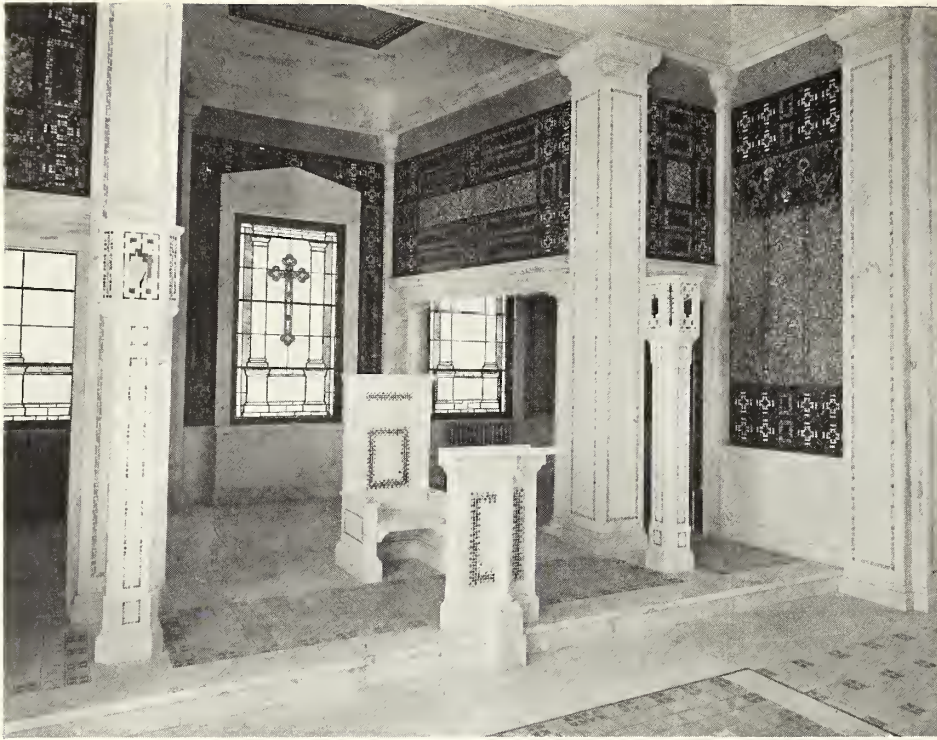
of this character and eliminated everything in any way suggestive of the somber atmosphere of mortuary structures. The prevailing impression is one of cheer and not of gloom. The white Colorado-Yule marble selected for the interior contributed richly in producing the final effective and dignified whole.

The building in point of convenience and beauty is a model and is worthy the careful inspection of cemetery men throughout the country. In all its features it is far in advance of the usual conception of structures of this character. It is a credit to Omaha and a source of pride to the cemetery association, the architect, and all who assisted in making it the finest and most complete building of its kind in this country. The entire exterior, including the front of the receiving vault, is of St. Cloud granite, with green tile roofing, the interior finish being of marble mosaic and bronze. The doors and frames for the art glass windows are of bronze.

The plan for the interior decorations included the treatment of the electric lighting, much of which is concealed behind the marble cornice line, as well as including four marble electroliers placed two at the front entrance and one right and left of the apse.

The treatment is unique in that to the marble, which is of selected veined white, mosaic inserts of rich ornament in gold and mother of pearl have been added, while the main walls and ceiling throughout have been filled with mosaic ornament in rich and appropriate schemes of color, the main walls having additional symbolism of growing trees, suggestive of the Tree of Life, with its flora and foliage filling the upper part of each panel.

The windows are treated in an architectural scheme of classic detail, so as to give abundant light to the interior and show effectively the rich scheme of color in the wall decoration, the highest note of which is found in the four standing angel



INTERIOR VIEW, NEW CHAPEL AND CREMATORY, FOREST LAWN CEMETERY.

figures on the transept wall, which, by the symbols carried in their hands and by the titles in gold below, recall the four ideas of Faith, Hope, Love and Memory.

The floor has been designed in a combination of marble and tile, the tile being made specially for the building in a glazed white with an insert color of green.

Two large Colorado-Yule marble seats were designed for the right and left transept, and for the service a special desk and chair, both in marble, with enriched inserts of gold and mother of pearl, are placed in the center of the apse. This marble furniture, which is a new use of marble for such purposes, and the four marble electroliers complete the scheme of the interior enrichment, excepting the quotation on the frieze of the main auditorium, designed in two-fold form, so that it can be read as one

enters and leaves the chapel. In letters in high relief, treated in pure gold, it reads as follows: "Until the day break and the shadows flee away."

The effect of the interior is individual and characteristic. The architectural character of the building has been most effectively secured in the lines of constructional marble, the lines of ornamental mosaic, the details of the furniture, the lettering, as well as in the lead lines of the stained glass windows. All have been considered, each with relation to the other, so that a unified artistic effect has been secured.

In the outer vestibule the following historical inscriptions have been cut, one on either side, in the marble, and gilded in pure gold leaf: "Forest Lawn Cemetery Association, incorporated A. D. 1885, by James J. Brown, Charles H. Brown, Moses

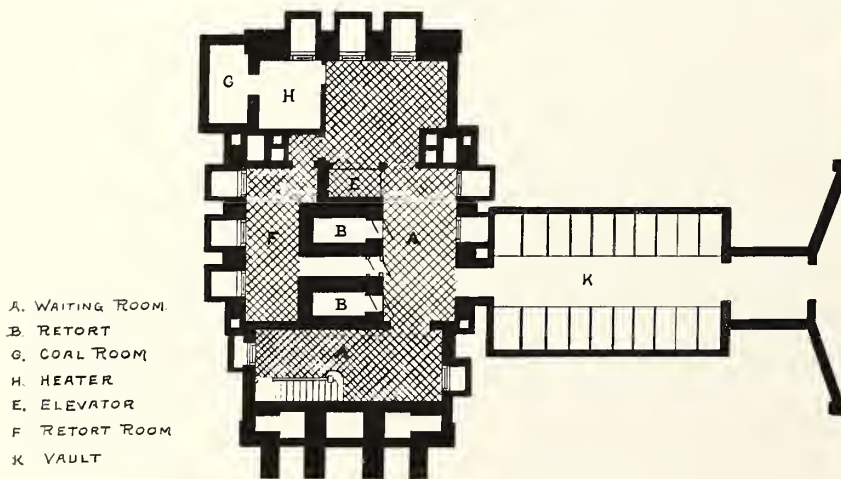
H. Bliss, William R. Bowen, John H. Bracken, Hugh C. Denise, James Forsyth, Simeon T. Joselyn, Herman Kountze, Eben K. Long, Milton Rogers, Arthur P. Wood, Orlando S. Wood," and on the opposite panel: "Forest Lawn Chapel, erected A. D. 1913. Trustees: O. C. Campbell, president; M. H. Bliss, vice-president; H. S. Mann, secretary-treasurer; J. Y. Craig, superintendent; James H. Adams, Randall K. Brown, Herbert M. Rogers, Joseph C. Root, Arthur P. Wood; John McDonald, architect."

The building is 40x64 feet in ground dimensions on a plot of ground facing the entrance drive. The basement connects with the receiving vault and Columbarium erected some time ago. On the main floor are the family room, organ room, chancel, auditorium, two toilet rooms and the main entrance or vestibule. The stairs to the basement are of marble, as is a large portion of the interior of the basement, which has a family waiting room, retort rooms and work rooms. On the wall of the family room is a bronze memorial tablet in raised letters, as follows:

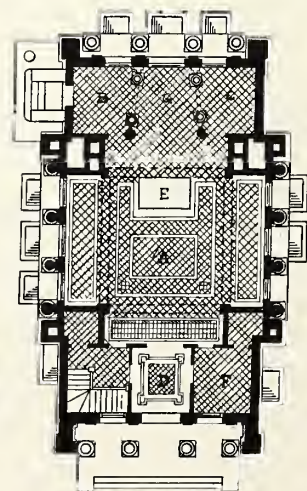
"I have the purpose to help forward progressive movements, even in my latest hours, and hence hereby decree that the earthly mantle which I shall drop ere long, when my real self passes onward to the world unseen, shall be swiftly enfolded in the flames and rendered powerless harmfully to affect the health of the living. Let no friend of mine say aught to prevent the cremation of my cast-off body. The fact that the popular mind has not come to this decision renders it all the more my duty, who have seen the light, to stand for it in death, as I have sincerely meant in life to stand by the great cause of poor, oppressed humanity."

Frances Willard."

The receiving vault is a concrete structure with 96 slate crypts 2'x2'4"x7'4", underground, connecting with the basement of the chapel. The Columbarium is in the 10-foot entrance of the vault, which is 35 feet long. The only exposed part of the



BASEMENT PLAN



FIRST FLOOR PLAN

vault is the front, which is of St. Cloud granite.

The shrubs used in the attractive plantings about the chapel and receiving vault that may be seen in our exterior view are the following: *Hydrangea paniculata grandiflora* and *querciflora*; *Spiraea prunifolia*, *Thunbergii*, *Douglasii* and *Van Houttei*; *Philadelphus grandiflora* and *speciosus*; *Syringa vulgaris*, *alba* and *grandiflora*.

One of the most important problems in the construction of the buildings was the selection of type of retorts and crematory equipment best adapted to the work to be done. Very careful study was made of different types of plants in the United States and abroad. Representatives were sent to confer with the owners of a large number of crematories and careful, systematic study of the question was made.

It was finally decided to adopt the Jarvis-Koerting system, and the contract for building and equipping the retorts was made with the Jarvis Engineering Co., of Boston. The Jarvis-Koerting furnace was believed to be the most modern and scientific in the field. Two installations had been made of the furnace just preceding those at the Forest Lawn Cemetery, namely, one at Springfield, Mass., and one for the city of Philadelphia.

Fuel oil is used for the heat in the retorts, but the system differs from other oil-burning types in that the oil is pre-heated and vaporized before it reaches the retort. This process eliminates the usual spraying of the oil directly from the burner into the retorts and approaches very closely to that most desirable condition for this work—intense heat without flame. The whole system is extremely simple and effective in operation. The absence of smoke and unburned gases is particularly noticeable.

The two retorts are rectangular and approximately of the following dimensions: Six feet wide, 12 feet long and 7 feet high. The flues are constructed under the floor.

Owing to the extremely high temperature obtained, which in certain parts of the retorts reaches as high as 3,000 degrees F., the entire interior is constructed of specially made fire brick moulded from a clay found only in western Pennsylvania. The retorts are encased in red brick masonry and cement. Solid cast bronze doors of a design conforming with the other doors of the building have been placed at the front of the retorts.

Forty cremations have been had since the plant was completed in July, 1913, and the fact that the retorts are operating with entire success has in every way justified the trustees in their selection of equipment. The first incineration was the body of Andrew Larson. Mr. Larson died before the completion of the retorts. He requested that his body be the first to be cremated in Nebraska.

It is interesting to note that shortly after the Omaha plant was placed in commission it attracted the attention of the United States government, and its builders were engaged by the United States government to duplicate the Omaha installation on the Isthmus of Panama. The Panama crematory was completed and the first cremation had on February 6, 1914. Up to the present time there have been 4,878 cremations at the Panama plant. The company is now engaged in constructing a similar plant for the Bohemian National Cemetery of Chicago.

The question of the elevators was one of the hardest construction problems the builders had to solve, and a new construction was developed which other cemeteries will study with much profit. In crematory buildings where retorts are placed under the chapel it has always been a problem to find proper means for conveyance from floor to floor, particularly as the buildings are often located outside the limits of service lines for electric power or are too far from the main lines for hydraulic power. This problem has been solved at the Forest Lawn crematory by the installation of an elevator which consists of a plunger, underneath a platform, operating through a stuffing box into a cylinder. The power plant consists of a street railway type closed air compressor with governor, air tank reservoir and oil tank reservoir. This is located at a convenient distance from the hatchway and in a small tank there is a supply of oil equal to the displacement of the plunger with necessary reserve. The air reservoir is normally charged at 90 pounds pressure. When lifting the load air is discharged into the oil tank, forcing oil under the plunger, thus raising the load, and when descending surplus air in the oil tank is discharged through a muffler, the oil being forced back into the tank and used over again. The advantages of this plant are simplicity, absence of wearing

parts, automatic lubrication of all parts and accessibility of machinery, and in a building where there is sometimes no heat in winter the use of the oil is designed to eliminate the possibility of freezing. The installation of Forest Lawn crematory is made for a net load of 600 pounds and the platform is 4 feet by 7 feet 8 inches. The elevator platform floor is designed to correspond with the chapel floor, being finished in the same tile design and forms part of the chapel floor when elevator is not in service.

The chapel has a seating capacity of 150 and is equipped with Durfee opera chairs, a convenient type of seat that will fold and still leave the legs open and standing. They are made of quartered oak and genuine leather and were furnished by the Durfee Manufacturing Co., of Grand Rapids, Mich.

The total cost of the building was \$103,000. The architect was John McDonald, of Omaha, and the general contractor Walter Peterson, of Omaha. The marble work was furnished by the Colorado-Yule Marble Co., of Marble, Colo. The crematory equipment was designed and built by the Jarvis Engineering Co., 61 Oliver street, Boston, and the art glass and mosaic work by J. & R. Lamb, of New York. The elevators were specially constructed and installed by the Otis Elevator Co., of Chicago.

Following are the officers of the Forest Lawn Cemetery Association: O. C. Campbell, president; T. A. Creigh, vice-president; M. H. Bliss, treasurer; H. S. Mann, secretary; J. Y. Craig, superintendent.

There have been 15,298 interments made to October 1, 1914. The first was made September 18, 1886, under the direction of the present superintendent, J. Y. Craig.

There are 320 acres in Forest Lawn, sufficient to accommodate the people of Omaha and vicinity for many generations. About 25 acres have been sold and about 55 improved.

THE OBITUARY RECORD.

William Dennison, for many years prominent in park and cemetery work in Chicago as a former superintendent of Oak Woods Cemetery and former superintendent of West Park boulevards, died October 12 at the home of his daughter, Mrs. J. Lawrence Hewitt, 940 North Lawler avenue, Chicago, following a lingering illness. The funeral services were held from the Hewitt home, the Rev. Mr. Rich, of the Swedenborgian Church, of which he was a devout member, officiating. Interment was at Rosehill. For many years Mr. Dennison was a writer of political and economic subjects for the *Maury Democrat*, of Tennessee, under the nom de plume of "Carry Scott." He was also engaged in the cut-stone and lumber industries in the rebuilding of Chicago after the fire of 1871. He was also connected in an executive ca-

capacity with the early harbor and breakwater improvements and the Illinois and Michigan canal. He was superintendent of Oak Woods Cemetery for many years and also superintendent of West Park boulevards during Governor Altgeld's administration. His latest work was the laying out, designing and improving of Riverside Cemeteries at Fargo, N. D., from which position he retired three years ago and had since lived with his daughter. Mr. Dennison was born July 17, 1844, at South Shields, Durham County, England. For forty-four years he was a resident of Chicago and for eight years a resident of Austin. His widow and four children—Walter H. Dennison, Mrs. William A. Furness, Mrs. J. L. Hewitt and Mrs. J. T. Yerkes—survive him.

A. J. DOWNING, PIONEER LANDSCAPE ARCHITECT

An address before the New York Convention of the American Association of Park Superintendents, by Frank A. Waugh, Professor of Landscape Gardening, Massachusetts Agricultural College.

Newburgh has fine parks. It is surrounded by the most beautiful natural landscape. In the foreground flows one of the noblest and most beautiful of all the rivers of the world. Yet for none of these has this body of men come here today. This great international association meets here, drawn by the memory of one eminent name—the name of a man whose genius stands out like the steadfast beacon light through the darkness of three-quarters of a century of crowded American history.

Andrew Jackson Downing was born in this town of Newburgh on October 30, 1815, and here he lived the whole of that short and wonderful life which until this day breathes its inspiration upon us. He was the youngest of his family, the child of his parents' age, physically weak and slender, but mentally precocious. His parents were poor, and Andrew was reared on the great American diet of plain living and hard work. He had little schooling, the principal feature of his school training being an attendance of a few months at the academy in the neighboring town of Montgomery. But he did have the large benefit of work in his father's nursery and of quiet association with this rich and noble landscape—two things which left a marked impress upon his character and showed their influence conspicuously in his life's work.

When he was about sixteen years old, and his school days ended, he had the good fortune to form a warm personal friendship with Baron von Liden, then the Austrian consul-general in America, who had a summer home here in Newburgh. This acquaintance led to others, and introduced the rapidly developing boy to the company of refined and talented men and women who were to be, aside from this ever-blessed landscape, his principal source of education.

During these years of early manhood he worked hard in the nursery, but harder still upon his studies, scientific, literary and artistic. He was already forming those high ambitions and noble dreams which made him the first of our American landscape gardeners—for us the discoverer of a new art and the founder of a new profession. His first work—and said by competent witnesses to be his greatest—was the building of his own house and the development of his own grounds. According to all accounts, this must have been most consummately done. He then began to develop the general practice of the landscape gardener in much the same form as it is now followed by leading men in the profession. His work was largely on private places in the neighborhood of New York and Newport, his most famous public project having been the grounds in Wash-

ington about the capitol, the White House and the Smithsonian Institution. In the summer of 1850, while on a most inspiring visit to England, he found a young architect by the name of Calvery Vaux—a name afterward famous in America—whom he brought home with him to be his partner in this professional practice.

For us today it is impossible to forget that he was one of the first and ablest advocates of the public park, an institution then almost unknown and unheard of in America. He aided powerfully with tongue and pen in the strenuous fight to establish Central Park, New York, an institution which has had an incalculable influence in shaping American park plans and policies ever since.

Parallel with his development as a landscape gardener ran his equally notable development as a man of letters. He quickly became known as the greatest American writer in the field of rural affairs and as a literary artist of genuine talent. His first and most unqualified success was his book on "Landscape Gardening," which was published in 1841, when he was 26 years old, a book which stands today as a classic and a masterpiece. The following year saw the publication of his "Cottage Residences." In 1845, when he was 30 years old, he gave the world "The Fruits and Fruit Trees of America," another epoch-making work in a totally different field. In 1846 he became the editor of the "Horticulturist," and in this office did the most notable literary work of his whole career. In 1850 he put out his "Architecture of Country Houses." In 1852 he edited the American edition of Mrs. Loudon's "Gardening for Ladies." In the meantime his other works had sold so freely that he had been obliged to prepare several new editions, each one a great advance upon its predecessor.

Then, on July 28, 1852, came his tragic and untimely death. When we think of all that he might have accomplished with a few more years of life in this period of his capable maturity we are compelled for ourselves to share the grief of these friends of 1852 who were never able sufficiently to mourn his loss.

These rough outlines of a great and many-sided life must serve our present needs. It is not for me at this late day to add anything to the memorial prepared by his own intimate friends, nor could I presume to revise the estimate of his character given by such competent authority as his distinguished literary biographer, George William Curtis. It does seem fair, however, for us in our day to try once more the measure of his genius—to endeavor to count what portions of his work have lived to help us. This at least his sorrowing friends could not do in 1852.

Andrew Jackson Downing must be remembered to us first of all as a nurseryman. It was in this field that his life began. In this field he learned great lessons which yielded him the most substantial and obvious help in other lines of work. Moreover, it was through his nursery work that he reached and profoundly influenced hundreds of men in other parts of the country. It is probably true that Downing's staunchest personal disciples were the men who formed their attachment to him at this point.

His architectural work was of very considerable consequence. While undoubtedly it represents that part of his thought which has proved of least worth to us in our generation, yet it was credited in its time with far-reaching influence for good. In any study of his intellect and character it is obligatory to take into the account the wide, serious and fruitful study which he gave to this subject.

We are to remember him also as a writer. There are those who believe that his greatest achievements were in the field of literature. This was obviously the opinion of his biographer, George William Curtis. It is easy to join in this opinion when we view those numerous books of his in their several fields and in their several editions; when we consider especially those masterful essays contributed to the "Horticulturist"; and still more when we look at all these achievements in the light of the later development of a whole realm of country life literature, now an enormous, but then an untouched, field.

His literary fame rests upon a most substantial basis, seeing his product had both matter and style. He had real first-hand information to communicate. Much more than that, he had sound personal opinions, the product of careful study by a most extraordinary mind. This information and these opinions were offered to the world in the best literary dress of the times—in a style clear, finished, distinguished.

Yet it seems to me that we in this day are most of all indebted to Downing for his achievements in the field of landscape architecture. There have been many capable nurserymen in America, hundreds of other writers of ability, other architects of greater influence, but Downing was without a question the founder of American landscape gardening. It is here that his work is still the freshest and most vital.

As I look over the work of our great leader in the field of landscape gardening I see three different aspects of it, in each of which his powerful character has impressed itself on following generations. First, and probably least, was the professional work in the design of private and public grounds. At the present time none

of his authentic works exist except in the most fragmentary condition, and the records of his designs are too meager to be given much careful study. Yet in his own day and in the immediately succeeding years his work was seen by all aspiring young landscape architects and to them was inspiration, law and gospel.

Next, and easily superior to his executed works, were his writings, and pre-eminently his book on "Landscape Gardening." The influence of these books and essays has been, and still is, of immeasurable proportions.

The third feature of his service to us, and one which seems to have been widely overlooked, was his practical establishment in America of the profession of landscape architecture, as it is now fashionably called, though he always spoke of it under the good English term of landscape gardening. Other men had unquestionably practiced this art in America before him, but his genius soared so far above all else that had ever been done as to put the whole profession upon a new plane. Other men found it easy to follow in the path which had opened. Several of these disciples did so well under his inspiration as to have preserved their names to the present day. Frank J. Scott and H. W. S. Cleveland may be named as examples of this immediate discipleship.

Out of this story, which we necessarily trace with so much difficulty, of the personal influence of Downing in the beginnings of the profession, there emerges, however, one conspicuous incident. Calvert Vaux has already been mentioned as coming to America in 1850 to be associated with Downing in his professional work. This very able and well-trained young architect doubtless had a considerable influence upon his acute and impressionable partner, but it is quite as certain that the stranger qualities of Downing left their impress upon Vaux. The professional work undertaken by them jointly was continued by Vaux after Downing's death. And then a few years later another most fortunate juncture occurred when Vaux in his turn became professionally associated with the late Frederick Law Olmsted. With the long and notable career of Olmsted landscape architecture became an established and recognized profession, and one in which the highest ideals were so firmly fixed as never again to be lost or obscured. This triple association of Downing, Vaux and Olmsted must ever form the great opening chapter in the history of the landscape profession in America.

Finally, and most of all, as we remember Andrew Jackson Downing we come to realize that he was a man of rare and ex-

traordinary gifts, a genius in the large and good meaning of the word. Any man beginning life in a new country, in poverty, almost without education, and with the handicap of physical weakness, who in the space of thirty-seven years reaches a position of commanding importance in four separate fields, such as pomology, architecture, landscape gardening and literature, and who in each field leaves work to last a century—such a man is more than a genius, he is a prodigy. His powers obviously and altogether transcend those of ordinary men.

Yet in Downing these prodigious faculties were so mixed and tempered with warm human qualities as to be largely lost to sight. We have learned so much to love the memory of the man as to forget the sum total of his genius. And today as we revisit the scenes he loved so well and bless ourselves with the inspiration of his memory, and try again to measure the bequest of his life to us, we need not let our admiration for his work in pomology, or literature, or landscape gardening stint our thought of his larger genius, nor need we dwell so long upon his superhuman genius as to lose our hold upon the man of flesh and blood who still commands the love and admiration of our common human hearts.

THE KANSAS CITY IDEA OF PARK PUBLICITY



NORTH TERRACE—THE CANYON.



THE PASEO—TROOST PARK LAKE.

The Park Board of Kansas City, Mo., has recently issued an illustrated souvenir book that is unique as an example of enlightened park publicity. There have been many finely illustrated descriptive books issued as annual reports by other park boards, some of them larger, more elaborate and more beautiful typographically than this, but none with so definite a purpose or so admirably arranged for usefulness to the people or for publicity for the parks.

The Kansas City book is pocket size, 48 pages, handsomely printed, embellished with

eighty small panoramic views of the parks, and is a condensed manual of the chief statistical and descriptive data about each park and boulevard.

One of the most interesting and valuable features of the book is a page given to detailed itineraries for one, two and three hour trips for visitors to the parks. The one-hour itinerary, which is typical of the others, reads as follows:

ONE HOUR.

Leave Union Station, through Penn Valley, to Broadway, to Armour, to Gillham Road via Westport High School, to Harrison, to Armour, to the Paseo, to Linwood, to Benton, to Gladstone, to Cliff Drive, to Maple, to Independence, to Admiral, to the Paseo—west side—to 15th Street; return the Paseo—east side—to Admiral, to Grand Avenue, to Union Station. Distance, 17 miles.

Next follows a synopsis of the main facts about the park system, as follows:

The charter amendment providing for Kansas City's park and boulevard system was adopted June 6, 1895. Active work began at once.

The park and boulevard system now comprises 1,985.60 acres of parks, 590.32 acres of parkways, 60.85 miles of improved boulevards and park drives, with an additional 52.44 miles of boulevard and park drives planned.

Plans adopted for acquisition: Roadways in parkways, 25.8 miles; parkways, 761 acres.

Total mileage of boulevard and park drives improved and planned, 139.09 miles.

Total area of parks and parkways acquired and planned, 3,336.92 acres.

The cost of the park and boulevard system to April 21, 1914, is:

Acquisition of lands	\$ 7,554,505.69
Construction	4,058,318.71
Maintenance	1,678,346.60

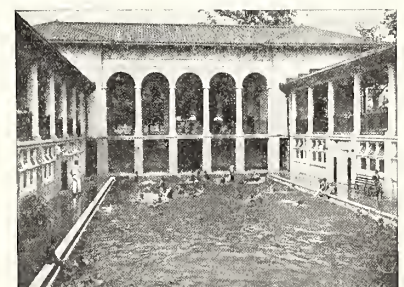
Total\$13,291,171.00

A brief, well-written history and description of the park system is given, from which we quote as follows:

The well distributed system of parks in all parts of the city, giving easy access within walking distance to all residents, is connected by an equally well distributed system of boulevards and



PENN VALLEY PARK.



THE GROVE—POOL IN BATH HOUSE.



CLIFF DRIVE, NORTH TERRACE PARK.



SWOPE PARK, WILD CAT HOLLOW DRIVE.



TWO VIEWS IN PENN VALLEY PARK.



parkways on easy natural lines and grades. These connecting links have become the centers for the best residential sections, tying them closely together along easy, natural lines, supplying not only fine pleasure drives, but establishing permanent residential properties with increasing values, and—an equally important result—a stability of values.

The principle, which was adopted by George E. Kessler, landscape architect for the Board of Park Commissioners since the inception of the work

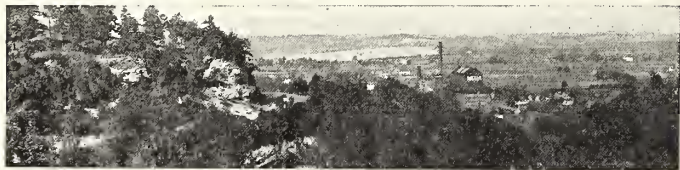
ness of the system taking advantage of natural conditions, all connected in one harmonious whole, has made it unique, and has spread its fame world wide.

The main body of the book is given to a condensed, readable description of the interesting features of each park. The following, referring to Penn Valley Park, is typical:

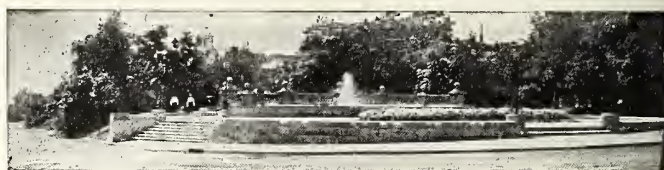
landing, to Westport, passed through the park. The operating plant for the West Park District, located near 30th and Central streets, was completed in 1910.

The ten acres in the northwest corner of this park is to be devoted to playground activities. A large field house with administrative offices, shower baths, swimming pool, 60x102 feet; gymnasium and assembly rooms is under construction. This playground, when completed, will be one of the best and most fully equipped playgrounds in the city.

This park contains eight tennis courts, which are



NORTH TERRACE—PROSPECT POINT.



THE PASEO—NINTH STREET FOUNTAIN.

and whose creative genius has enabled the several boards to accomplish the splendid results that have been attained, was to follow nature as closely as possible, to adapt the planning to the natural conditions. The rugged characteristics of Kansas City's topography was taken advantage of in the selection of all the larger parks which are naturally those giving the most picturesque and characteristic scenery as well as conserving the rough "topographic eccentricities" from the ruthless destruction and marring by man's hand and rescuing it from the ugliness that had already begun to appear in some places.

The outer belt of the park and boulevard system with Cliff Drive on the bluffs, with its collateral levee boulevard as planned on the bank of the Missouri River on the north, the proposed Blue Valley Parkway on the east, Meyer Boulevard on the south and Ward Parkway in conjunction with West Pennway on the west is interlaced with an interior system which leads to the very heart of the city, bringing all parts of the city in touch with the system. The very comprehensive-

PENN VALLEY PARK.

Located near the new Union Station, south of 26th street and west of Main street.

Area, 131.92 acres.

Date acquired, 1900.

Date completed in the present state, 1903.

Cost of acquisition \$ 570,759.60

Cost of construction 312,936.80

Cost of maintenance 122,221.15

Total \$1,305,917.55

This is a rugged, picturesque park, near the new Union Station and the business section of the city—a park that is a gem, a real diamond in the rough. The land taken for this park was occupied by some three hundred houses, most of them very dilapidated. These have been removed and the land restored to its rugged picturesqueness, touched with landscape treatment and a system of drives that are surpassed in beauty by none. Broadway Hill gives a fine panoramic view of the business section. A branch of the old Santa Fe Trail from Kansas City, known then as Westport

used by about 400 people per day. Three hundred lessons have been given in tennis to the beginners or those wishing to know special strokes. The largest percentage of these "students" have been business men. Playground attendance during the season was 12,650. Games, folk dancing, sewing and basketry were taught.

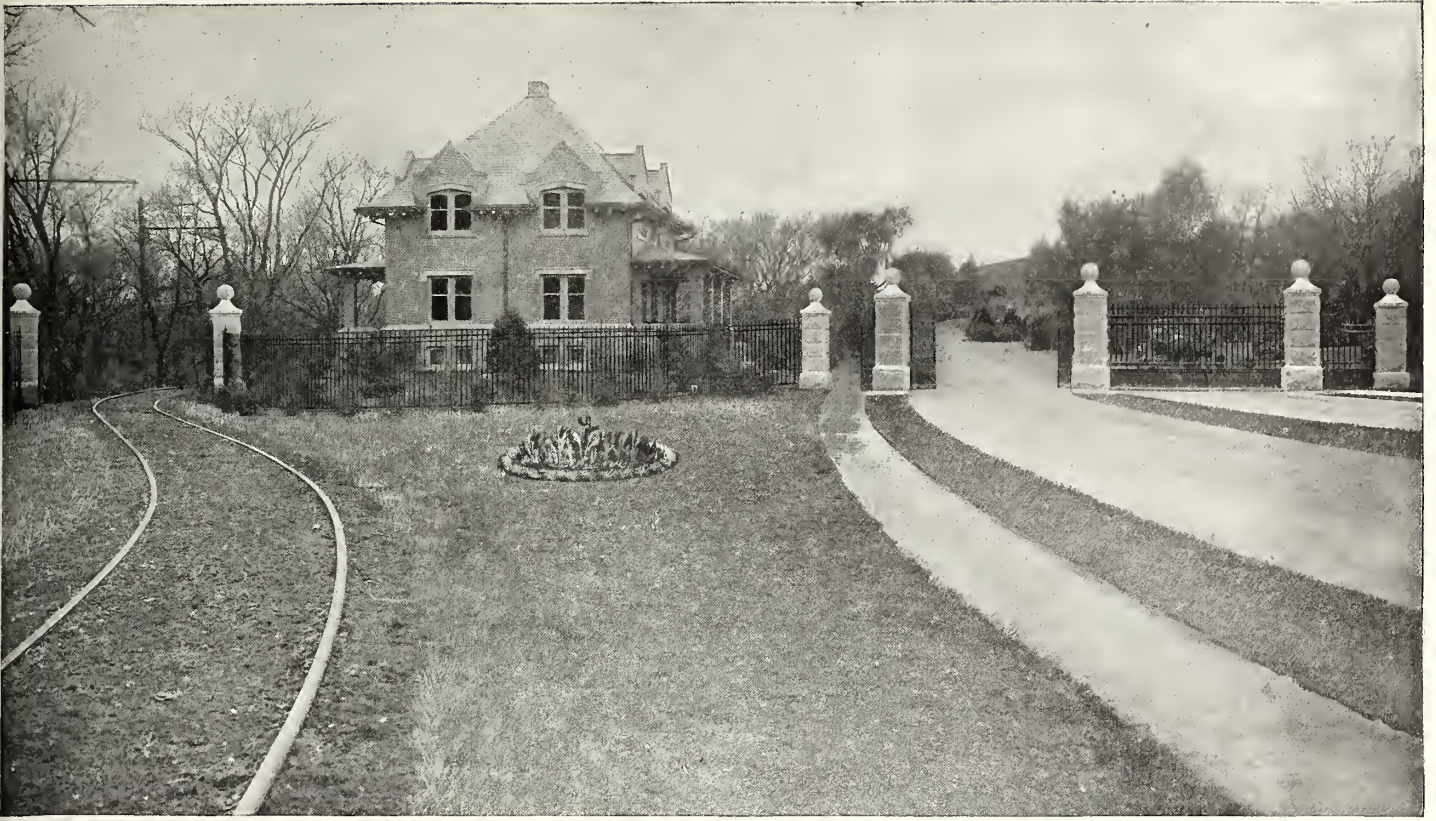
The illustrations shown on these pages are typical examples of the eighty views taken that adorn the pages of the book, making the little volume in effect a vastly interesting moving picture story of one of our most interesting park systems.

The officers of the Kansas City Park Board are: President, C. C. Craver; secretary, Thomas C. Harrington; landscape architect, George E. Kessler; Ralph R. Benedict, assistant executive officer; Fred Gabelman, engineer.



SWOPE PARK, JULY 4, 1914.





MAIN ENTRANCE AND OFFICE, FOREST LAWN CEMETERY, OMAHA, NEB.
Excellent Grouping of Carriage Drive, Foot Paths, Street Car Entrance and Building.

TYPES OF CEMETERY GATES AND ENTRANCES

The designing of a cemetery entrance is one of the most difficult problems with which the landscape architect is confronted. The plan and construction work must be such as to provide for the traffic and utilitarian uses of the gateways; to present a sightly view from both within and without the grounds; to arrange for the location of the necessary administration building, and to provide the maximum of security when the grounds are closed to the public.

There has been much progress made in the landscape effects in cemetery entrances within the past few years, especially in the matter of skillful planting and the placing of the buildings to secure pleasing views.

Forest Lawn Cemetery, Omaha, Neb., had a very unusual and difficult problem to solve in its construction by reason of having to provide not only for the ordinary carriage and foot travel, but for a street car entrance as well.

One of our photographs shows how successfully the conditions have been met by the arrangement of a double entrance with a stretch of fence between. The office building stands just behind this connecting fence, and when the foliage and planting is at its best the picture is even more attractive than shown in our illustration.

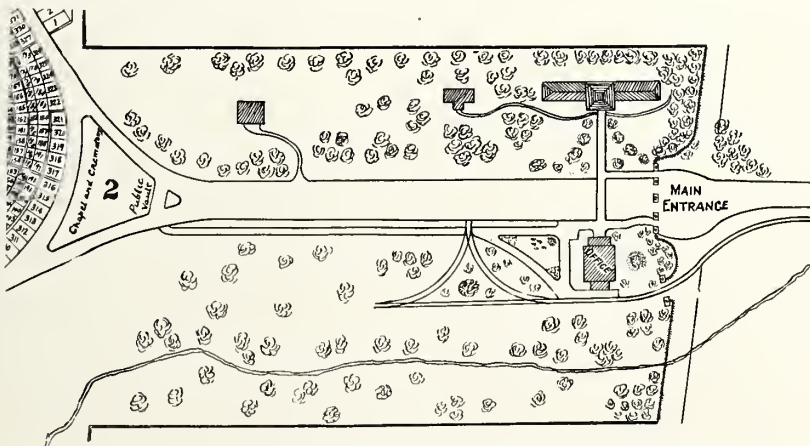
The main driveway at the entrance is 40 feet; as it winds around the ground it becomes 25 feet. The other driveways in the

grounds are 20 feet. The boulevard leading to the grounds from the main thoroughfare to the city from the north is 150 feet wide. The walks are 6 feet. The posts are of granite and are 3 feet square at base, with a shaft $2\frac{1}{2}$ feet square. The base is 2 feet high, the shaft 6 feet and the ball about 3 feet in diameter. The office building is a fine piece of architecture in Roman brick with slate roof. The office and waiting rooms are on the main floor. Street cars enter the cemetery at the rear of the office building, and arrangements have been made so that there is ample accommodation for street cars, carriages and visitors on foot.

A plan of the entrance illustrated here shows the general layout of the grounds at this point and the course of the main driveway as it approaches the beautiful new chapel which is described elsewhere in this issue.

The planting at the entrance includes the following trees: *Ulmus Americana*, *glutinosus*, *incana*, *pendula* and *fulva*; *Betula alba*; *Picea glauca*, *Engelmanii* and *pungens*; *Pinus*, *Austriaca*, *mugho*, *flexilis* and *sylvestris*; *Salix dolorosa*; *Elaeagnus*, *oleaster* and *angustifolia*; *Acer plantanus*; *Abies Douglasii*; *Juniperus Virginiana*; *Thuya occidentalis*.

One of the most interesting examples of a simple, effective treatment of entrance and fence is the new rear entrance to Harmony Grove Cemetery, Salem, Mass., illus-



PLAN OF ENTRANCE, FOREST LAWN CEMETERY, OMAHA, NEB.
Showing Layout of Gateway Structures, and Location of New Chapel.



NEW REAR ENTRANCE TO HARMONY GROVE CEMETERY, SALEM, MASS.
Fence Set Back from Sidewalk to Provide for Border Planting.

trated. The massive posts of sap-face stone add an ornamental touch to the well-arranged gateway which is a part of 840 feet of new fencing on this part of the grounds. The posts are 3 feet square and 11 feet high. The pickets are of groove steel, 7 feet high and 4 inches from center to center. This fence has been set eight feet back from the boundary line to permit of massed border planting along the entire frontage between fence and sidewalk. Roses will be planted at the posts and hardy shrubbery and perennials between the posts. The object is to have a continuous floral display from early spring until late fall.

A simple and inexpensive form of the massive stone post entrance is seen in the main entrance to Brookville Cemetery, Brookville, Pa., which was erected at a cost of \$800. This cemetery has also recently built an interesting concrete fountain 60 feet in diameter and 4 feet deep. The center of the fountain contains a spray of pyramid shape and there are four green copper frogs that spray water from their mouth. The center is built up in rough rock work with a small basin of concrete at the base of the spray. This was filled with a water plant in the shape of an umbrella. A green Jacob's ladder was planted and covered most of the rock work. One hundred red geraniums were planted around the outer edges. There are four approaches, all centering at the fountain, and at the four corners a large vase is placed containing palms, variegated vinca and geraniums. The drive is made of rolled cinders and outlined with California privet hedge grown eight inches high and trimmed square. They have also planted twenty-four silver leaf and bark weeping maple trees on drive with four catalpa trees on corners. The approach to the fountain is through an amphitheater of native grown hemlock five feet high and trimmed round, with two pergolas as an entrance to the enclosure where the annual Flower Day program is held each year. The amphitheater is laid out inside in three circles, one large and two small, with walk circling around. In the middle circle is placed a sundial.

THE COVER ILLUSTRATION.

The entrance to Greenwood Cemetery, Dallas, Tex., illustrated on the cover of this issue, is a type of the all-metal entrance, the arch posts and fences all being executed in metal. This is a style of gateway very popular with the smaller cemeteries where the driveway is not very wide, although it is not by any means restricted to the smaller sizes. The posts are made in many different designs and sizes. The larger posts of this character, of which an example was shown on the cover of our October issue, are often executed in open scroll-work designs that can be made as ornamental and massive as the purchaser may desire. The one shown this month is the closed post pattern that can also be used in many varieties and in many combinations with the main arch and side arches. The contract for this entrance also included 4,000 feet of fence, all of which was designed and built by the Stewart Iron Works Company, of Cincinnati, Ohio. They have many styles of the all-iron entrance and archways which they will be glad to show to anyone interested in this form of entrance.

PUBLISHER'S STATEMENT.

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H. C. WHITAKER,
Business Manager.

Sworn to and subscribed before me this 16th day of September, 1914.

[SEAL]

M. J. STANTON,
Notary Public.

(My commission expires December 6, 1914.)



MAIN ENTRANCE, BROOKVILLE CEMETERY, BROOKVILLE, PA.

MODERN CREMATORY RETORT CONSTRUCTION



FRONT OF RETORTS. SPRINGFIELD, MASS., CREMATORY.

Whatever may be one's opinion of the relative advantages of cremation and earth burial, the steady, although limited, demand for cremation makes it advisable for the modern cemetery manager to keep in touch with the progress of cremation and with the construction and operation of crematories.

Undoubtedly the most important aspect in the recent advance of cremation has been the elimination of disagreeable physical conditions accompanying the process of incineration.

The chief opposition has in the past been due to the actual conditions accompanying a cremation, in crematories with the older type of retorts and heat obtaining equipment. Noisy operating mechanism for furnishing the necessary heat in the retorts; smoke and unburned gases escaping from the chimney during a cremation; slow progress to completion, have all had their influence in retarding popular approval of the practice.

The Jarvis-Koerting retort construction, used in the handsome new crematory in Forest Lawn Cemetery, Omaha, described elsewhere in this issue, has been designed with the idea of eliminating these objectionable accompaniments of cremation. By careful experimenting the manufacturers have perfected a retort in which complete combustion is obtained, and no smoke or unburned gases escape to be liberated from the chimney during cremation.

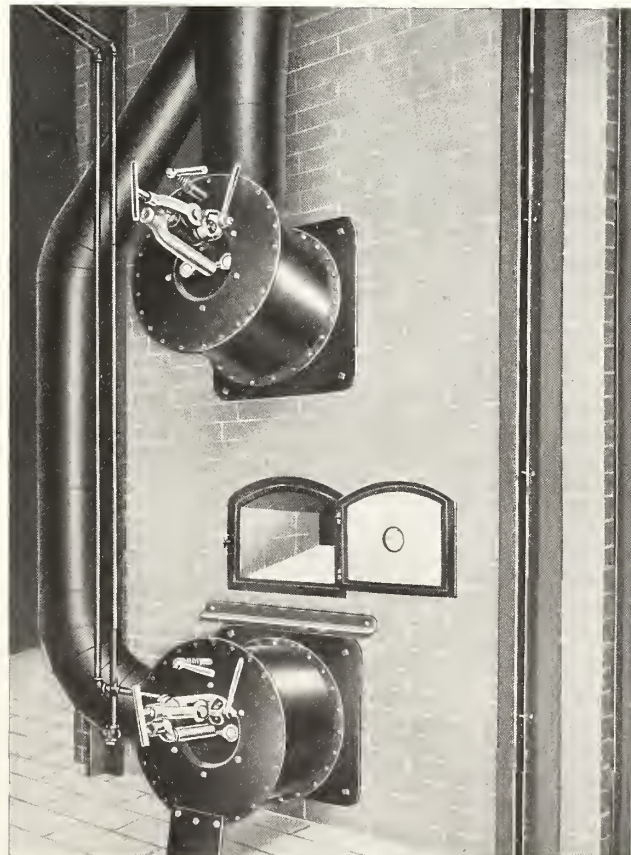
For obtaining the necessary temperature in the retort the fuel oil was deemed best adapted. Coal, coke and wood, although still used in many crematories, are very unsatisfactory. Producer gas systems are

used, but these require much mechanical equipment and high operating expense. Illuminating gas and natural gas have been utilized, and, especially as to the manufactured gas, which is very low in calorific value, large burners must be installed and compressed air used with the gas. These

burners are often noisy in operation and therefore objectionable. Considerable experimenting has been done in an endeavor to use electricity for this purpose. Up to the present time only one electrically heated crematory is in existence, and this has several unsatisfactory features. Several hours' time is required for cremating a body, and the cost for electricity is high.

Fuel oil is believed to furnish a most satisfactory means for obtaining the required temperature in a retort. Many oil plants have been installed in crematories, and operate with steam-jet burners or air-jet burners. Both these types of burners, however, have the disadvantage of making considerable noise, caused by the jet issuing from the nozzles. Further, in the case of the steam-jet burner it is necessary to have a boiler plant, with all its inconveniences, whereas with the air-jet burner an air compressor is required, with the disadvantage of high operating cost, noise and repairs.

The Koerting system overcomes these objectionable features by atomizing the oil by mechanical as well as physical action. The mechanical action of atomizing the oil is accomplished by forcing the oil through burners under high pressure, by means of a pump, while the physical action is accomplished by heating the oil to the flash point, so that it vaporizes as it leaves the nozzle. This mechanical oil firing system makes for



REAR OF RETORT, PHILADELPHIA CREMATORY.

noiselessness and simplicity of operation, and, with the Jarvis-Koerting retort, meets the exacting requirements of modern cremation.

The entire interior of each retort and flue is highly refractory fire brick masonry. Specially molded fire clay blocks are used instead of ordinary fire bricks. These have much greater durability and strength than the usual construction. Each retort, whether built as a single unit or as one of several in a single masonry structure, is heavily braced and reinforced. Fire tile doors, arranged for easy operating, are provided to completely seal the retort. The flues are preferably run under the floor to the base of the chimney.

The Koerting Patented Oil Firing Sys-

tem, as applied to crematories, consists of a small motor-driven oil pump an oil heater, a small motor-driven fan for supplying air to the retort, oil piping, and two burners for each retort. The two burners are at the rear end of the retort, one for the main or incinerating chamber, and one for the secondary or combustion chamber. There is very little preliminary work to be done in preparing for a cremation. The oil heater is lighted, or turned on if electricity is used, and the pump started. The oil then circulates through the piping and in a few minutes is ready to be turned into the burners. If it is desired to place the body in a cold retort, which seems the better practice, the lower burner is operated for fifteen or twenty minutes in order to heat

the combustion chamber. This can be done before or during the placing of the body in the main chamber, as the arrangement of the flues is such that there is no indication in the main chamber that the lower burner is operating. When the body has been placed, the tile door is lowered and the main door to the retort closed. The lower burner is then turned off and the main burner operated until the cremation is completed. The entire equipment is extremely simple and easily operated.

The Jarvis Engineering Co., 61 Oliver street, Boston, Mass., the builders of the Forest Lawn Crematory, are now installing a crematory of two retorts at Panama. This is the first installation made by the United States government.

ECHOES OF THE A. A. C. S. ST. LOUIS CONVENTION

Snap Shots and Dark Room Thoughts.
By Sid J. Hare.

To one who has the convention snapshot habit it is impossible to get down to hard work until we had satisfied ourselves as to what we caught with the camera at St. Louis, for there are few conventions where we met such noted people, plants and landscape plantings. In the dark room there is a revelry of "Oh's!" and "Ah's!" as picture after picture appears on the film. The first one was Brother Boice, with a half insulted look as he caught me in the act. He looks so natural that we will just consider he is getting ready to tell another good one.

Wednesday's long auto trip was recalled by a view in Calvary Cemetery, just as we made the loop around the lake. We had a ride through the business section, then over the boulevards and through the parks and fine residence district; then through Bellefontaine Cemetery, and then to Calvary, where we saw the handiwork of Brother Brazill, who has transformed hill and dale into a beautiful park-like cemetery.

Friday we were to take the trolley at 10 a. m. for the Missouri Botanical Garden. A few early birds, along with some rabbits, reached the garden an hour or so before that time and there met James Gurney, superintendent of Tower Grove Park, and William Ohlweiler, manager of the garden, and Mr. Irish, who was for seventeen years connected with the garden. Mr. Gurney is the man who has by loving care nursed into life many new forms of water lilies. Just as we entered the gate and stood admiring the beautiful lilies in the lake and the conservatory beyond we heard someone coming, and turned, and there was Mr. Ohlweiler with an armful of the grandest water lilies we have ever seen—purple and blue, and pink, white and dark red.

Sorry you were not there to hear the through the palms of the genial tropics to

story by Mr. Gurney as he opened up his soul's greatest secrets and to see the enthusiasm of this grand old plant lover, who has cherished the lilies for eighty or more years as a mother does her children.

Mr. Gurney and Mr. Falconer were at one time students and gardeners at Kew Garden, England, and Mr. Falconer says, "This is the man of all men among plants," and Mr. Gurney returns the compliment. One of our pictures shows Mr. Falconer placing all honor for results at Mr. Gurney's door. He is also largely responsible for Tower Grove Park with its water gardens, which is the real attraction in St. Louis.

This scene recalled a chance meeting I had with Mr. Gurney one early morning a few years ago. He stood beside a water bed of beautiful Amazon lilies, sad of heart and somewhat perturbed by the fact that someone had advised the Park Board of St. Louis to start economy in the park system by filling up and sodding over the water garden in Tower Grove Park. I remember his argument as we stood and admired the plants he had fondled into a new existence. "Ten thousand people stop in St. Louis each year to see this water garden, but show me five hundred who would stop to see a green lawn," he said. It is evident Mr. Gurney won the day with the Park Board, for he has his water gardens and St. Louis also has these beautiful water gardens and with them a wonderful man—just a lover of flowers, who can love things into new beauty and exquisite forms and colors which no one can describe with mere words.

We turned from the water garden to the conservatory and there was a tropical landscape brought and placed within the midst of our land in a great glass-covered world of its own. We left this varied scene of fern-covered slope and valley walk, with grotto and stream and lily pool, and on

a door that once more leads us out to just earth, for between the great range of glass was in preparation a formal garden where 47,000 bulbs will bloom next spring and many more thousand plants are now arranged to beautify this spot during the summer months of 1915.

Just as the cars unloaded at the gate and the 10 o'clock A. A. C. S. members began to look around the garden there was a clap of thunder that shook the earth and then the rain began to fall and all looked for shelter. There was a smile of satisfaction on the faces of those who came early and had an hour or so before the storm.

After lunch was served in one of the buildings we gathered in an assembly room to finish up the last session of our convention. Here several papers were read, but we lovers of plants listened with eagerness to the paper, "Flower Display Without Rain," by William Ohlweiler, general manager of the Missouri Botanical Garden, St. Louis. Many of those present had been sorely vexed trying to produce flowers during the past three dry years.

Following Mr. Ohlweiler's paper was one by John Noyes. Mr. Noyes is the landscape designer for the garden. This paper, "Pictures in a Park Cemetery," illustrated the secret of placing plants to make a picturesque landscape. There was profound silence as this paper, with its illustrations and explanations, was given, and it was not until we had adjourned that we heard the appropriate words of praise for these two addresses.

Random Reminiscences.
By William Falconer.

Wasn't it a real happy convention? We enjoyed every minute of it, and now are looking forward to Minneapolis, the Mecca of 1915, praying that we all may again meet there and continue in the cheerfulness of the gathering we had at St. Louis. Even the hotel guests noted us and remarked:

"They're cemetery sup'ts, they've come from afar,
And they're bent on odd capers, sunlight and star.
Pent up in a graveyard must be terribly drear,
So, when locse, those old fellows act awfully queer."

its kind they had ever witnessed. A feather in your cap, St. Louis—and this from Boston, too!

The convention should not be held in the city where the president is also superintendent of one of the local cemeteries; it gives that officer far too much to do. Take, for instance, President Brazill at St. Louis

universally beloved, departed brother, Timothy McCarthy.

J. J. Cunningham, superintendent of Calvary Cemetery, New York, averages sixty funerals a day—say, 20,000 to 23,000 a year. Who wants his job? Assuredly, I don't.

Horticulturally, John Reid, of Detroit, stands without a peer among us, but did



SNAP SHOTS OF THE A. A. C. S. CONVENTION AT ST. LOUIS, TAKEN BY SID. J. HARE.

1, R. D. Boice, the Octogenarian Member from Geneseo, Ill.; 2, The A. A. C. S. Party in Calvary; 3, Lake and Conservatory, Missouri Botanical Garden; 4, William Ohlweiler, Manager Missouri Botanical Garden, with an Armful of his Pets; 5 William Falconer Passing the Palm to Mr. Gurney; 6, Mr. Gurney beside his Lily Pond in Tower Grove Park.

As we entered the Planters' Hotel the first man we met was our dear old friend, the octogenarian, R. D. Boice, of Geneseo, Ill., the Nestor of our Association. What a joy it is to have him with us, and how he loves to come!

The ladies were a happy gathering, but in the sociable set we missed Mrs. Stephens, of Indianapolis; Mrs. Diering, of New York; Mrs. Hooper, of Richmond, and some others. Professionally, the absence of Mrs. Hay, of Erie, was a gap in the association. Miss Daisy Blaine, of Detroit, however, was an earnest and absorbing attendant. I tried to convince her that their way of massing all of the lots in a section together, without any intervening alleys or paths, was a mistake, but she was too strong for persuasion.

The Veiled Prophets' ball was, according to Mr. and Mrs. Creesy, of Salem, who were there, the most magnificent affair of

Not only did he have all of the dignity and detail of the presidency to attend to, but the preparing for, providing for and entertaining of the convention also largely fell on his shoulders. This is too much for one man. True, his work was faultless, generous, splendid, and without a hitch anywhere; but why overburden a good man because he is willing to work?

Among the absentees were Salway, Stephens, Scorgie, Ross, Roy, Diering, Cline, Green, Dix, Druckemiller, Gossard and others—giants, every one of them. How we missed them!

Sterling and to the point is James Currie, of Milwaukee. When he speaks we listen. And George Creesy, of Salem—what would we do without his rip-roaring laughter and hearty good humor? It always is a pleasure to grip the hand of Father Harrington, of Rhode Island; we never meet him without a memory of that

you ever know such a bashful man in meeting? Another instance, it not infrequently happens that he who knows the most says the least.

If there was a happier man in the convention than J. Y. Craig, of Omaha, as he tucked that little birthday token of love under his arm, who was he? And wasn't it a joy to every one of us to inscribe our names in the souvenir? Do more of it, boys; it's brotherly love.

Sid J. Hare, of Kansas City, is a picture fiend. Snap! snap! went his camera all day long, and even after the convention was over, between 4 and 5 o'clock Thursday afternoon, in the drizzling rain, I found him in Tower Grove Park, with a big Victoria leaf on its back, on the lily pond embankment, taking a time exposure. But these photographs from life are of inestimable value to him in his landscape work.

Didn't Keller and Rutherford and Howell and Gross make a dandy quartet? And we, as a ready chorus, held our own.

Gruss an Teplitz was the brilliant red rose so abundantly in bloom in the parks and gardens of St. Louis. It is a vigorous grower and in blossom all summer long.

That "nobody loves a fat man" is all nonsense. The hearty good will of everybody extended to Jacob Schwab, of Chicago, proved this sufficiently.

It is gratifying to see the interest Canadians take in the association. Fred Rutherford, of Hamilton, never misses a meeting, and at the sessions his queries are frequent and pointed, and, too, he insists upon their being answered. Last summer I saw his cemetery in Ontario; it is beautifully kept and progressively maintained; indeed, it is the pride of his city.

Ed Merriam, with lifetime Northern experience, three years ago went to Chattanooga as superintendent of Forest Hills Cemetery, and is delighted with his work, the people and the place. He has a good

word for everybody down there, more especially for our old friend, Dr. Bushnell. To remind us of the sunny South he brought up a big bunch of evergreen magnolia (*M. grandiflora*) sprays, to show the beauty of its scarlet fruit.

That Dixie's land is much interested in progressive cemeteries was evidenced by the number of prominent men present at the convention. Dr. Kesterson came from Knoxville to tell us of the beauties and growing favor of his mountain cemetery, and in photographs showed us the floral loveliness of the entrance gates designed by Sid J. Hare. Mr. Hooper, from Richmond; Mr. Yates, from Lynchburg, and Mr. Broughton, of Norfolk, all from Virginia, strongly impressed us with their determination that all of what is modern in cemeteries shall not alone be found in the North. And what a fine lot of men they are!

A delightful feature of these conventions is the aftermath—that is, stopping over on the way home to visit some of the leading

cemeteries in the cities we pass through. For instance, groups of superintendents stopped over at Peoria, Cincinnati, Indianapolis and other towns, even in smoky Pittsburgh, Philadelphia and Norfolk spent a week-end with us, to our great profit and pleasure.

Did Oregon get cold feet? A year ago a member from the Pacific coast worked enthusiastically among us at Buffalo to get the 1915 convention to Portland, and I became interested and pledged my willingness to go there, and several others did the same. But when the proper time came to decide where to go there was no invitation from Portland before us. Fooled again.

Yes, I have a kick coming. At the theater all of the baldheaded men got the front row of seats, but in that splendid picture of the members taken in Calvary Cemetery, St. Louis, only one of the favored few occupied the seats of honor, and were it not for the ladies who wedged him there he, too, might have been where we were.

SEASONABLE NOTES ON TREES AND SHRUBS

Some Winter Shrub Suggestions.

While lilacs, snowballs and certain other shrubs should be let alone during the winter, being neither trimmed nor covered with straw and manure, other bushes need special attention, says a recent bulletin of the Department of Agriculture. Hydrangeas (semi-herbaceous) in the South will last out the winter, says the Department, if properly cared for out of doors. The tops should be protected with straw or brush. This may be held in place about the bushes with a little manure or stones. The flower buds of the hydrangea form in the fall, and this cover will keep them from winter-killing while shielding the bush from winds and sun. In the North hydrangeas must be taken up, planted in tubs and placed in the cellar. This is generally true of latitudes north of Philadelphia.

The shrub known as brugmansia should be treated as is the hydrangea. The brugmansia (known botanically as *Datura*) is also called thorn apple. It is a cultivated form of Jimson weed and has long, bell-shaped white flowers and rather coarse foliage. The Department advises that as a rule shrubs should not be trimmed in the fall. This process is timely immediately after the blooming period, if this is in the spring, as in the case of the snowball. If the shrubs bloom in the fall, as do some hydrangeas, the rose of Sharon, and some lilacs, they should not be cut directly after blooming, but in the spring of the following year.

The mock orange, which is also known as "syringa," needs no special treatment to help it winter the severe weather. The name "syringa," although popularly applied to the mock orange, is really more appro-

priate for the lilac, which is known botanically by that designation, while the mock orange is botanically "*Philadelphus*."

Roses.—Almost all kinds of roses are hardy in the vicinities of Washington and St. Louis and to the south of a line drawn between these points. From Washington northward local conditions influence the successful cultivation of certain varieties. Some roses, as the briar and rugosa, need no protection, but other varieties, such as the hybrid-perpetuals, teas, and hybrid-teas, need special care, particularly north of the fortieth parallel. Teas and hybrid-teas hardly succeed in Chicago, although the hybrid-perpetuals grow as far north as Canada. All these classes do well on Long Island and in Boston, near the sea, when proper care is given them.

Fall Work Against Tussock Moth.

The caterpillar of the tussock moth, which is noticeable because of three long black tufts of hair protruding from its yellow body, has done considerable damage to many shade trees in the city of Washington during the summer and fall. This insect, which extends through the eastern United States, as far west as Iowa, seems to prefer poplars, maples, elms, alders, birches and willows. Besides injuring trees, its barbed hairs occasionally produce considerable irritation on the skin of people upon whom the caterpillars drop. To control the ravages of this pest the coming season, the conspicuous white egg masses laid by the moth should be destroyed after the leaves have fallen, when they may be very easily noticed.

The U. S. Department of Agriculture's entomologist considers the above method preferable to that of banding the trees after the egg masses have already been laid. During the past season a number of trees in the city of Washington have been banded to prevent the moths from climbing up their trunks when there were already egg masses above the bands which hatched out caterpillars. These caterpillars were prevented from coming out of the trees as much as others were prevented from coming into them. Of course, if the owner of a tree is sure that it is absolutely free from egg masses (which are always conspicuous and usually are found low down on the trunk) he may use a band to advantage to keep out intruders. For this purpose insect lime, of which there are several brands on the market, is the best substance and a ring made around the tree will give service for several weeks in warm weather without being renewed.

As soon as the leaves have fallen, egg masses should be scraped from the trees and then destroyed by burning. The work must be absolutely thorough, and not an egg mass overlooked. A better way, however, is to use applications of creosote oil on the eggs. This is similar to the liquid that is used against the gypsy moth in Massachusetts. About 50 per cent of turpentine is added to it to keep it liquid in cold weather. The workman is furnished with a pole, to the end of which a small sponge is tied. He goes from tree to tree, dipping the sponge occasionally into the creosote preparation and touching with it each egg mass found. This is a simple and very rapid method. As with the other method, the work must be absolutely thorough.

Fall Fertilizers for Lawn.

To stimulate the growth of a lawn and to improve its appearance for the following spring no better treatment can be recommended than the application of properly rotted manure in the late fall, according to the United States Department of Agriculture's specialist. This application should not be made until after the frosts have stopped the growth of the grass. Ten to twenty-two horse loads should be applied to the acre, according as the soil is more or less rich.

It is most important that the manure should be thoroughly rotted before application, so that all weed seeds are killed, otherwise damage done by weeds will more than offset the fertilizing value of the application. Manure really needs careful handling before it is suited for spreading over the lawn. Unless it is properly composted it may have most of its valuable constituents destroyed by improper handling. To compost manure properly it should be treated as follows:

Pile all manure in heaps with alternate layers of sod or other litter. Keep it wet enough so it will not burn. Let it stand a whole year through summer and winter, forking it over two or three times during the year. It will then be ready for use on the lawns and danger from weed seeds will be minimized.

Ground Bone Meal and Wood Ashes.—Many people object to the use of manure at all, not only because of the danger from weed seeds, but because of its unsightly and insanitary appearance. These will undoubtedly prefer to use something else, and the most economical substitute is finely ground bone or bone meal. This should be applied at the rate of from 500 pounds to one ton per acre, according as the ground is more or less rich. It should cost between \$25 and \$30 a ton.

With the bone meal it is desirable to use double the quantity of wood ashes. These ashes contain considerable lime in a very desirable form, as well as other valuable elements. However, they are apt to be more or less costly.

Ordinarily muriate of potash would be found more economical than wood ashes, although the potash does not contain the lime which the other fertilizer imparts to the soil. On account of the European war the potash may prove more difficult to obtain than the wood ashes. Only one-tenth the quantity of potash should be used as of bone meal.

The potash may be sown separately or mixed with the bone meal as desired. The same is true of wood ashes if these are used instead of potash. All applications should be made before the ground freezes

permanently for the winter, as otherwise the fertilizer may be largely washed from the soil before it has a chance to become incorporated with it.

In regions where cottonseed meal may be obtained at a price not over \$25 per ton it may be used satisfactorily in the place of the ground bone. Tankage and fish scraps are even richer in important elements than ground bone, but are frequently in bad mechanical condition for handling (that is, they contain hair or other foreign coarse matter). Their bad odor also makes them objectionable.

Prepared sheep manure is an excellent dressing. As it has been sterilized by drying and rendered odorless, there are not the objections to it that there might be to ordinary manure. Its one drawback is expensiveness.

To Protect Worn Places.—If there are any parts of the lawn which will be tramped over when they are not frozen, and especially when snow is melting there, these parts should be protected to prevent persons from cutting across. Tramping on the turf when it is covered by slush or snow is as destructive to a lawn as almost anything else.

It is hardly necessary to say that nothing will be gained by scattering grass seed on the lawn at this season.

PARK INSTITUTE OF NEW ENGLAND FORMED

In October there was formed at a meeting in Hartford, Conn., a new organization known as the Park Institute of New England, an educational organization having for its object to make an intimate study of park problems, through papers and discussion at frequent meetings. At the Hartford meeting eleven cities were represented by park officials from Boston, Providence, Worcester, Springfield, Hartford, New Haven, Waterbury, New Britain, Northampton, Holyoke and Naugatuck. About three-fourths of the population that live in cities in New England were represented at this time.

An interesting paper on "Municipal Dancing" was read by Superintendent Ladd, of the Springfield, Mass., park system, and G. M. Headle presented an able address, "Tree Walks and Talks in Hartford Parks," a new feature of Hartford park work conducted by Mr. Headle last year.

The next meeting will probably be held about the middle of December, and it is hoped that all the cities of New England will have a representative present.

The following memorandum of the formation, officially adopted at the first meeting, explains the purpose of the organization:

PARK INSTITUTE OF NEW ENGLAND.

Memorandum of Its Formation.

We, citizens and officials of the different cities of New England, interested in municipal parks and playgrounds, and desirous of making available to each of us and the public such knowledge and experience, arising from the methods and management of parks and playgrounds by cities, in order that they may give increased opportunity for the growth and development of children and young people, and add to the comfort and happiness of grownups, do agree to form ourselves into a Park Institute for New England and to abide by the following conditions:

1. One member shall have entire charge of the affairs of the Institute, to be known as its manager, who may make assessments as needed, arrange for meetings, and do whatsoever work as in his judgment is necessary. He is to serve without compensation, and for one year or until his successor is chosen, to be elected at the first meeting held after the first of January each year.

2. There may be six meetings each year to consist of addresses, papers, these and discussions which may be typewritten and sent to each member as requested.

3. Candidates for membership to be proposed by any member, the vote being taken by letter, three negatives to reject. Each member at the first meeting to prepare a thesis upon some subject of his own choosing.

4. Each member agrees to prepare papers and addresses on any topic that may be assigned to him by the manager, or to lead or take part in the discussion, to serve on committees of investigation or other matters as the manager may direct.

5. The manager may drop from the role those members who fail to attend three consecutive meetings.

6. As the purpose of these gatherings is for the serious consideration and formulation of the work and service of parks and playgrounds, all

social affairs and banquets are to be discouraged and not to prevail until after the meeting for the presentation of subjects and their discussion have adjourned.

George H. Hollister, superintendent of Keney Park, Hartford, Conn., was elected manager of the Institute. His address is 272 Westland street, Hartford, Conn.

Mr. Hollister is from old New England stock, a graduate of the Connecticut Agricultural College in 1902, where he remained for two years as an assistant professor of horticulture. Then for three years he was assistant entomologist for the Connecticut Agricultural Experiment Station, among other duties having direct charge of the gypsy moth work. Four years ago he was appointed foreman of Keney Park and has been its superintendent for the last two years, in which position he has been eminently successful. Mr. Hollister is a young man with a bright future before him, a most faithful worker and a diligent student, and is regarded as an ideal man to direct the fortunes of the Park Institute of New England.

The Institute is open to all who are interested in municipal park work, whether park officials or not, and it is hoped all interested will write to Mr. Hollister for the program of the next meeting and make it a point to attend.

LAWN TREATMENT TO SET OFF MONUMENTS



AN ATTRACTIVELY PLANTED BACKGROUND FOR FINE MONUMENT IN GREENWOOD CEMETERY, KNOXVILLE, TENN.

One of the cemeteries that "started right" with a thoroughgoing lawn plan throughout and that can furnish many lessons in management and development on modern lines is Greenwood, Knoxville, Tenn., whose unique pergola entrance was recently described and illustrated in these pages.

One of the matters that receives careful attention at Greenwood is planting to set off monuments, and the two photographs shown here illustrate how good shrubbery plantings and a judicious mingling of open lawn, trees and monuments combine to make attractive cemetery scenery.

That the lot owners appreciate the beauties of the modern lawn cemetery was recently forcibly demonstrated to the managers of Greenwood by a letter written to the cemetery authorities and later published in the local papers.

We quote as follows from it as illustrative of the attitude of the cemetery visitor:

One often hears the remark, "How quickly we are forgotten when we are gone." It is a cold cruel sort of a thing to say in the presence of the recently hereaved especially, no matter how true it may be.

That one is quickly forgotten when gone was forcibly brought to the minds of some citizens in East Knoxville by an incident which occurred during the opening of Jefferson Street into Henderson Street, some twenty years ago. Jefferson is a narrow street running along the north boundary of the old "Methodist Hill" cemetery. This cemetery was laid out probably 110 or 115 years ago. Naturally the city authorities presumed that the old ramshackle fence surrounding the cemetery contained all the bodies ever buried in this cemetery. However, in grading down the street they cut through a dozen graves. In places only a thin black seam about the thickness of one's hand indicated where the coffin, with the body it contained, had been about wholly absorbed back to original dust. But in one place the workmen's pick struck a heavy metallic case. It was decided by those in charge of the work that, while metal-

lic coffins are common now, only the very well to do provided such modes of burial back in the days when this casket was put in the ground. An effort was made to scour off the plate bearing the name, but it was so badly eroded as to be undecipherable. It was decided to remove the lid, and to the astonishment of everyone, there appeared the face of a beautiful girl, apparently about fifteen years of age, in a perfect state of preservation.

Every day thoughts of thousands of the living go out to loved ones whose bodies have been laid to rest in some cemetery, and what a consolation to those living it would be to know that the bodies of their immediate household had been entombed in a cemetery which had been established on a plan whereby the resting place of everybody confined therein will be guaranteed to be perpetually kept in an attractive and befitting manner, no matter what becomes of the living.

Thousands of fathers and mothers worry and sigh to know if the graves of children buried in some cemetery hundreds of miles back at the former home, are being cared for at all.

There appears only one way to obviate this worry and care of the living for the graves of the departed ones, and that is to conduct the management of the cemetery on business principles—however harsh the term may seem in this connection. The new modern cemetery situated two or three miles north of Knoxville, known as "Greenwood Cemetery" is organized on just such a plan that the management converts the major portion of the first funds arising from sale of lots, into a fund for improving the property, and a perpetual fund for maintaining these improvements.

Each year shows a marvelous improvement in the beautiful growth of flowers, shrubs and trees, until now there is practically but one universal and insistent remark made by visitors, and that is that a "burial park" is a far better idea than a "cemetery" which carries with it more or less the idea of briars and brambles.

We wish we could say something that would induce people to visit this beautiful burial park. We insist that the beauty of the pergola at the main entrance, the marble columns at the gateways, the marble dressed roadways through the park, the artistic settings of trees, rare plants and great beds of lovely flowers, the whole arranged on a carefully developed plan of one of the world's greatest landscape artists, surpass any description we can attempt. But why not go and view this beautiful place some Sunday afternoon, as the writer recently did, and come away impressed with the idea that after all, a cemetery may be so planned and managed that it "turns sorrow into joy and causes the pangs of death to seem less real."

The "Friedrich Spohr" monument shown here is a striking object lesson in how the Germans educate the public in modern cemetery art and in the setting off of monuments by appropriate planting. This memorial is an unusually fine architectural tablet memorial, with a niche for vases and flowers in the die. The just proportions, the massive effect secured by the projecting die, and the well-balanced arrangement of inscription and vase niche are especially to be noted. This design is the work of H. Kaletsch, and was selected in a competition of German artists and architects, and executed in that country exclusively by the members of the Association of German Granite Workers. It is of German Märkerwald granite. We are indebted to the above organization for permission to publish this interesting picture.



FINE LANDSCAPE OF TREES, OPEN LAWN AND MONUMENTS IN GREENWOOD CEMETERY, KNOXVILLE, TENN.



HANDSOME MONUMENTAL TABLET AND ITS SETTING IN A GERMAN CEMETERY ART EXHIBIT.

ASKED AND ANSWERED

Getting Rid of Blackbirds.

Editor Asked and Answered:—We are greatly bothered with blackbirds in one of our down-town parks and have been unable to get rid of them. The park is quite heavily wooded, with soft maple and Norway spruce predominating. The birds flock in about an hour before sundown and stay over night. On account of the muss they make it has become a real problem to get rid of them. Could any of the other park superintendents suggest any method of control?—H. L. B., Mich.

I confess that this is something new to me, though I am often asked about methods of attracting birds. The term blackbirds is rather an elastic one and may mean one of several birds, but I suspect that your inquirer is pestered by flocks of starlings, a European bird that is becoming somewhat of a nuisance in spots, though it undoubtedly destroys a great many insects of various kinds. This is the only bird that would travel together in great numbers at this time, though, of course, other birds, like the grackle, cow blackbird, etc., will do so when migrating. Without having more definite information to go by, I would advise the frightening away of the birds at dusk, or just when they are about to settle down for the night, by the firing of blank shotgun cartridges or the lighting of smoky fires among the trees, or the use of a strong stream of water to dislodge them. One or all of these measures should induce the birds to search for other shelter if persisted in for a few days.

HERMANN W. MERKEL.

Zoological Park, N. Y. City.

Your correspondent states that the blackbirds come before sundown and stay over night. If he desires to discourage their visits it might be well for him to try a few shots with a shotgun each evening. They would probably soon find out that they were not welcome and would discontinue their nightly visits. I should not advise poisoning them, unless this method be used as the last resort. FRANK BAKER,

Supt., National Zoological Park.

Washington, D. C.

Where blackbirds, starlings or other gregarious birds choose shade trees in villages, parks or cemeteries they usually may be dislodged by the use of Roman candles. The most favorable time for operation is after dark, when the birds become settled for the night. When the fiery balls from the candles burst among them they flee in confusion and are not liable to return. If they persist in coming back they should be treated a second time with Roman candles or small rockets.

A. K. FISHER,

In Charge, Economic Investigation,
Bureau of Biological Survey.

Washington, D. C.

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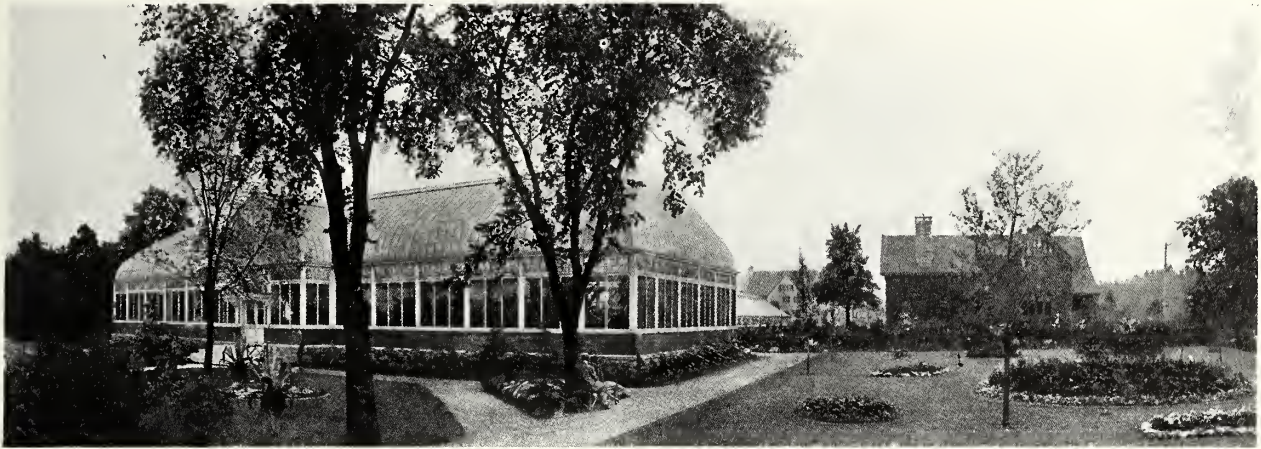
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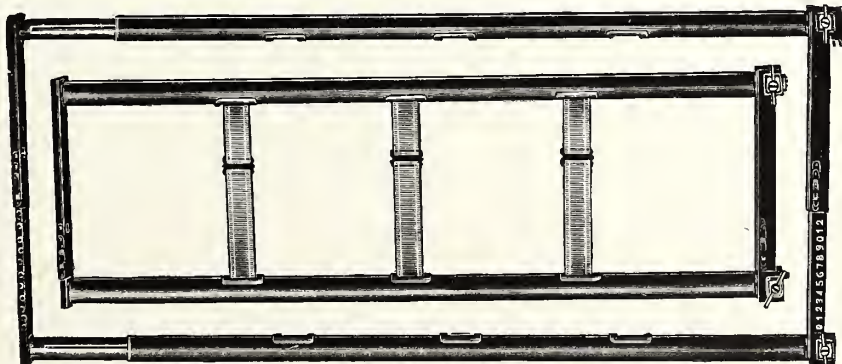
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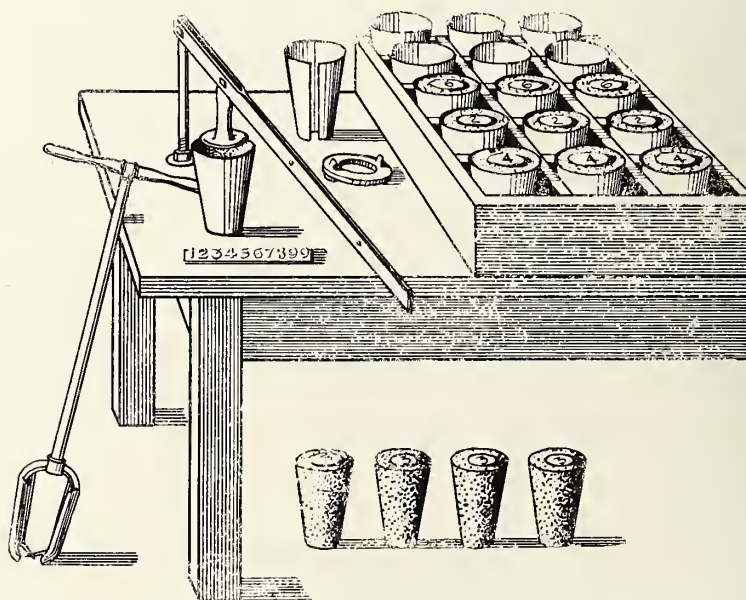
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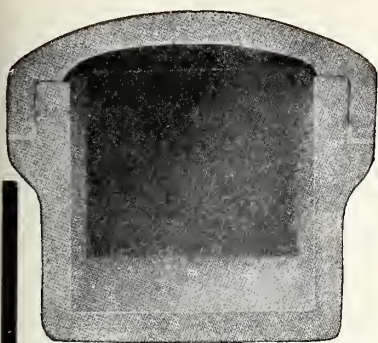


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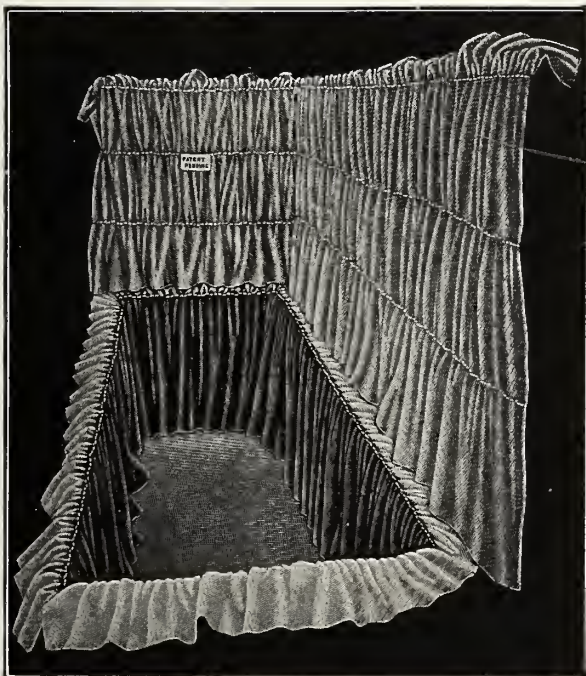
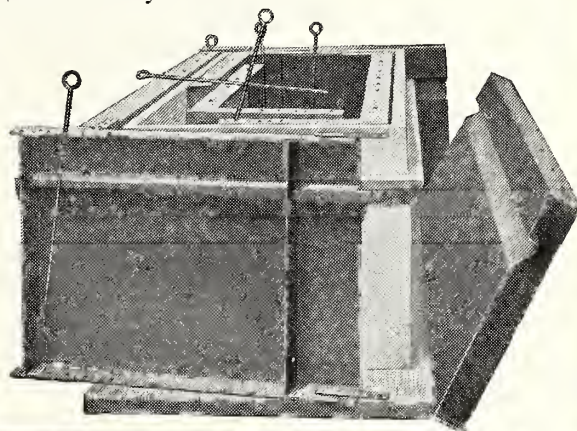
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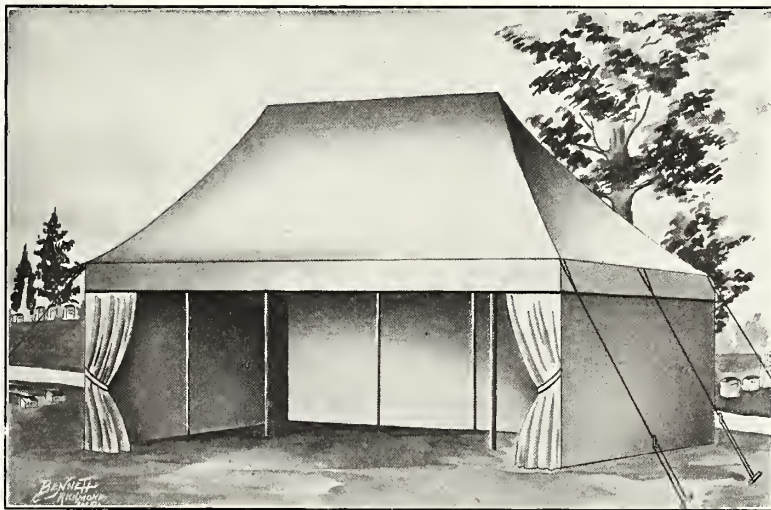
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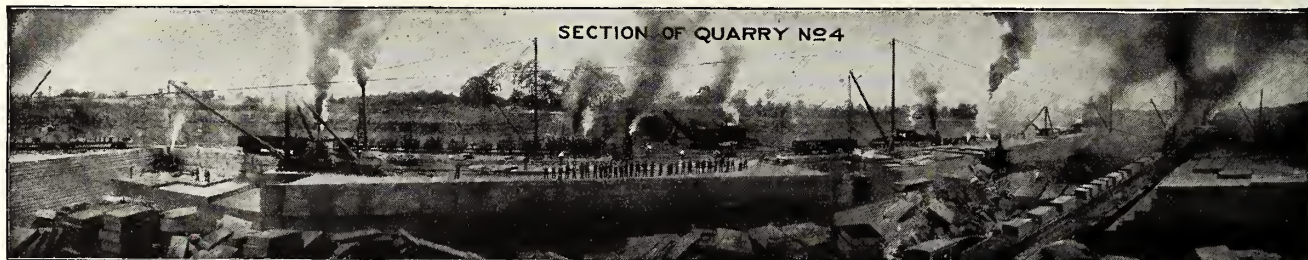
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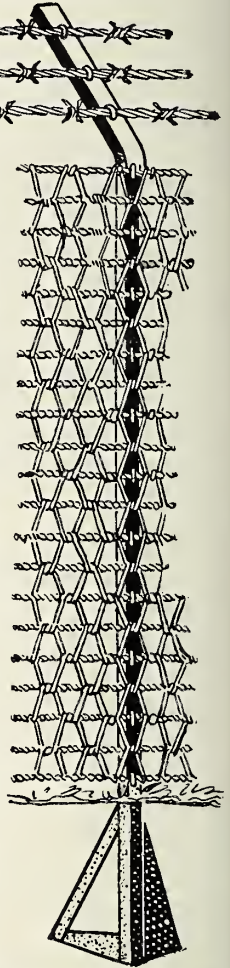
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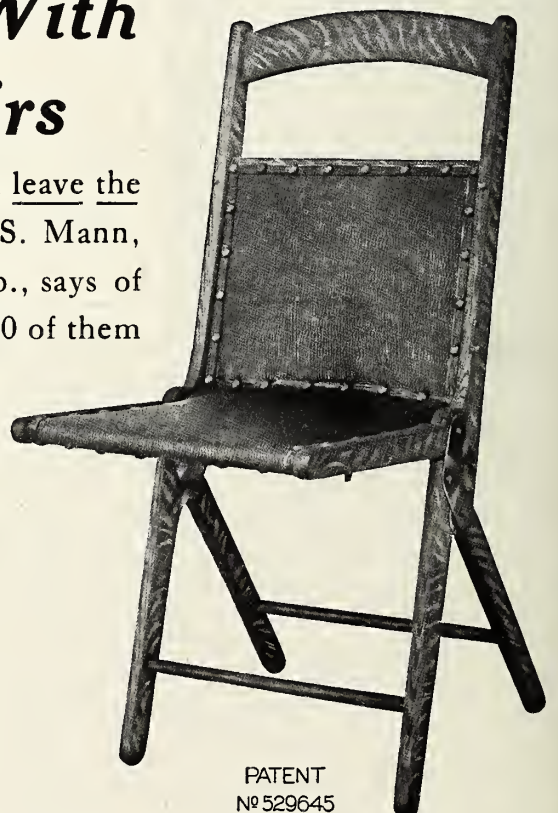
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Vol. XXIV., No. 10 DECEMBER, 1914

SPECIAL FEATURES IN THIS ISSUE

Success in Privately Managed Cemeteries—Developing Denver's
Great Mountain Parks—Unique Entrance to Tacoma's Scenic
Park—Grouping of Cemetery Buildings and Entrance



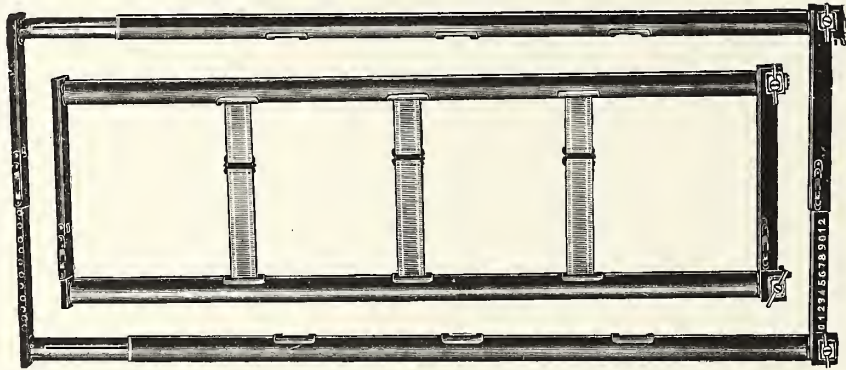
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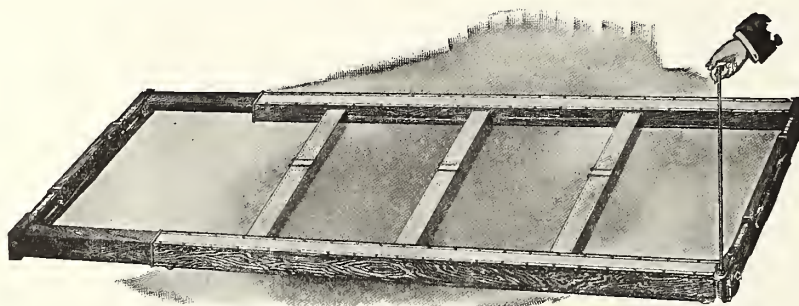
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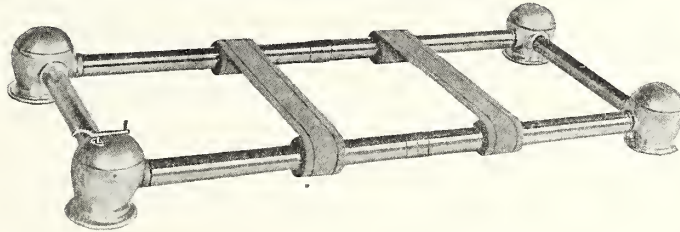
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EDITORIAL

DECEMBER, 1914

VOL. XXIV No. 10

Cemetery Removal Defeated in San Francisco

It will be recalled that in years past interments in the old cemeteries within the city limits of San Francisco were forbidden. Recently an ordinance was passed by the Board of Supervisors ordering the removal of the bodies from the four cemeteries, Calvary, Laurel Hill, Masonic and Odd Fellows, subject to the approval of the voters at the polls. The ordinance was vigorously opposed and was defeated by a majority of over 25,000 votes.

The Cemetery Protective Association, the Society of California Pioneers and other organizations opposed the plan and advocated the preservation of the old cemeteries as parks. Frank L. Fenton, Mills Bldg., San Francisco, secretary of the Cemetery Protective Association, writes as follows regarding the campaign against the plan: "For two years past the people of San Francisco had been educated up to the idea by the improvement clubs that the cemeteries must be removed. The ordinance gave a certain time within which the removals must be made by the cemetery associations, and if not done within that time, the Board of Health of the city would undertake to remove the bodies and assess the charges against the plot owners. Our campaign lasted

two months. I think there were three chief factors that influenced voters in defeating the removal of the cemeteries, viz: Sentiment and respect for the dead; the short time allowed for removal under the ordinance; the heavy financial burden that it would impose upon the plot owners and the cemetery associations."

The Downtown Association, an organization which favored the removal ordinance, gave the following reasons in its favor: "The cemeteries are located in a progressive and thickly populated portion of the city and thereby retard the general improvement of the district. The cemeteries have been in disuse and allowed to deteriorate for want of care for more than fourteen years. Totally neglected and unguarded, they offer a refuge to loitering and suspicious characters. The cemetery lands are exempt from taxation and, unimproved, represents an estimated value positively exceeding \$7,000,000, and in all probability reaching \$10,000,000. The continually increasing valuation of the now non-assessable cemetery improvements on the land, and the further increase of the property from Fillmore street to the ocean, would add to the city's assessed valuation, upward of \$50,000,000 thereby adding at least \$500,000 to the tax receipts annually."

Experimental Landscape Work

The arboriculturist of the State College of Forestry at Syracuse, N. Y., who is a graduate landscape engineer, is making tree surveys of a number of communities in the state as a part of the extension work in forestry of the college. From these tree surveys will result planting plans and suggestions for beautification not only of streets and parks, but the grounds of public buildings in the various communities. Following this advisory work the arboriculturist of the college will give illustrated lectures for the purpose of letting the people of the communities know how much work of this kind means to civic development and beautification. Too little attention is being paid to trees along our country roads, in school yards and on playgrounds about the state. Systematic effort is being made by the college to interest the people of various communities in this work. During the past month the arboriculturist has made reconnaissance tree surveys in New Rochelle, Newburgh, Olean and in Binghamton, and the work will be continued as rapidly as possible over the state.

The American Rose Society last spring completed arrangements to co-operate with the United States Department of Agriculture in establishing a rose garden at the nation's capital. This garden is to contain as complete a collection of roses as will grow out of doors in this section of America. The society is furnish-

ing the roses, while the department has set aside two acres of ground at its Arlington farm for the garden, which will be under the direction of federal horticultural specialists. The farm is in Virginia, just across the Potomac from the city of Washington and convenient to the Washington-Virginia trolley line. The garden already contains about 320 varieties, but there are many hundred kinds not yet included, and eventually the site can accommodate as many as 2,000 varieties if they can be secured. The garden is already laid out and makes an interesting show place for visitors to Washington. Teas and hybrid teas, for instance, have a bed to themselves as do hybrid perpetuals. As far as is practicable, roses are arranged according to color. Arbors are being planned to increase the attractiveness of the garden, and these will be in place next spring. Any grower of roses who thinks he may have roses not already in the national collection has been invited by the American Rose Society to contribute a sample plant. Correspondence concerning such plants should be sent to Alexander Cumming, Jr., of Cromwell, Conn., who is chairman of the society's Committee on Gardens. Either Mr. Cumming or the Department of Agriculture will supply a plan of the garden and a list of varieties already grown to the interested rosarian who applies for them.

Editorial Notes

To make Portland truly the city of roses the Municipal Park Bureau, of Portland, Ore., has arranged to distribute 25,000 yearling rose bushes to all who will agree to plant them in the parking strips along the streets in front of their residences. The distribution has begun and the plants will be delivered by the Park Bureau free of charge immediately upon notification in writing, provided the seekers agree to stipulations imposed by the bureau. Superintendent of Parks Convill and Landscape Architect E. T. Mische have worked out a plan for the planting of the rose bushes to secure a proper color scheme.

An interesting experiment in social service in the parks is be-

ing tried in Hartford, Conn., in providing work for the unemployed in the improvement of the parks. Mr. George A. Parker, superintendent of parks, has studied out the conditions of the work very carefully and the experiment will be watched with much interest. It is not intended that this shall represent either a permanent or an efficient method of park development. Park men will at once recognize many reasons both for and against the plan. The regulations governing the work as outlined by Mr. Parker on another page should be carefully studied and the results carefully weighed before a final opinion is given as to the success or failure of this experiment in park sociology.

FLORAL DISPLAYS WITHOUT RAIN

Address before the Association of American Cemetery Superintendents by Wm. Ohlweiler, Manager, Missouri Botanical Garden, Saint Louis, October 8, 1914.



NEW CONSERVATORIES, MISSOURI BOTANICAL GARDEN, FINISHED NOVEMBER, 1913. PLANTATIONS DEVELOPED IN TWO DRY SEASONS.

While the growing of floral displays has been perhaps more in the province of the park superintendent than in that of the cemetery superintendent, there is no question but that the tendency of the modern cemetery is toward a more cheerful and landscape effect than it has been. With this tendency granted, there is a distinct community of interests between the efforts of the park and the cemetery superintendents. There is perhaps no more distressing feature of any landscape scheme than to see the floral exhibits confined to selected area, usually in prominent places, while those areas that are isolated from the water supply are given over to vast spaces of dead grass, poor shrubbery, or nothing at all. Inability of placing any confidence in the amount or distribution of the rainfall, and the inability of supplying sufficient moisture by artificial means, are the main causes for such neglect. That these conditions are not prohibitive is the purpose of this article.

It is not the purpose of this article to advise the production of floral displays in the total absence of rainfall, but to show the methods of treatment where the rainfall is somewhat erratic. Such conditions are met with nearly every summer in all the states of the middle west. In Saint Louis during the past few seasons the amount of rainfall has been very much below normal and this has been intensified by the long periods of extreme drought. By quoting the weather summary from the August number of the Missouri Botanical Garden Bulletin some idea will be gained of the conditions that we have had to contend with here. The quotation follows:

"The unprecedented drought of the summer of 1914 has at last been broken and the Garden is beginning to show the effect of the recent rains. According to the meteorological summary of the weather

bureau, 'the period extending from March 1, 1914, to July 31, five months, was the driest of which there is a record in Saint Louis. The record covers a period of 78 years, from January, 1837, to date. The total precipitation was 5.48 inches. The normal amount for this period is 20.48 inches. Previous to this year the least precipitation for the five months ending on July 31, was 9.06 inches in 1871; the greatest precipitation for a similar period was 40.31 inches in 1848. In the months of May, June and July, 1914, the total was 2.31 inches, which is by far the lowest amount on record for a similar period; previous to this year the lowest amount was 4.24 inches in 1911; before 1911 the lowest record was 5.32 inches in 1870. May and June, 1914, were phenomenally dry, the total precipitation for these two months being .79 inch, or 8.33 inches below the normal.'"

The water requirements of plants are far in excess of the amounts that have been available in Saint Louis during the past

summer. The production of two tons of dry matter of the staple crops under the best conditions of management would require the equivalent of from four to fifteen inches of rainfall. This is greatly in excess of the amount given by the weather bureau, i. e., .79 inch. If, then, the amounts of rainfall have been so exceedingly low, how are we to proceed to produce floral displays under such conditions?

There are two factors that are usually available to the grower of flowers out of doors, which with proper handling may be made to yield good results. These are cultivation and irrigation.

Cultivation of the soil together with the addition of water retaining constituents as humus or other organic substances, will nearly solve the problem where only a moderate amount of moisture is available. This moderate amount of moisture may be the rare summer shower or the systematic application of water by artificial means. In any case the problem confronting the grower of plants is the conservation of the moisture that is available. Thorough cultivation of the plants is the easiest and the cheapest method and when practised from the early spring to late fall will be productive of good results. Weeds should not be the excuse for cultivation, for cultivation should primarily be practised for the conservation of the water supply and not for the eradication of weeds. In fact where thorough cultivation is the rule, weeds will not grow. When weeds will grow luxuriantly then there is no necessity for the cultivation of the soil for the conserving of the water supply, for flowering plants are but cultivated weeds and require but little additional attention as such.

A mulch is of course any loose material that by covering the surface of the ground breaks up the capillary action of the soil so



COSMOS PLANTING PHOTOGRAPHED OCTOBER 20, 1914.

that evaporation is considerably diminished. This mulch may consist of straw, manure, dead grass, or loose pulverized soil. All except the latter must be added to the soil each year and because of the amount of work that they involve are not as desirable as the soil mulch. When they become wet by the rains they also become packed and tend in the course of time to re-establish the process of evaporation by supplying again the conditions favorable to capillarity. Owing to their organic composition they form admirable conditions for the breeding of insects and for the starting of many fungous diseases. The soil mulch on the other hand requires renewing after each heavy rain, but it has the advantage that it is clean and does not require any special effort in placing it where it belongs.

With these few remarks upon the desirability and advantages of a mulch we may take up the improvement of the soil itself, so as to increase its ability to hold or absorb water when it is supplied. The ability of a clay soil to hold water for long periods of time and its tendency to give it up slowly is perhaps as well known as the ease with which a sandy soil gives up water. On the other hand a sandy soil will absorb nearly all the rain that falls upon it while the clay soil will not absorb it nearly as fast. Both of these kinds of soil then possess certain advantages and disadvantages that we should like to see in our ideal soil. That is, we should like to have a soil that would readily take all the rain or water from a hose that we could give it but that would hold on to it as well as the best of the clay soils. Fortunately the addition of humus or well-rotted vegetable material will answer the same purpose for each of these extremes of soils. It readily absorbs water and its presence in a soil insures a maximum amount of absorption when water is supplied to the soil. This condition we can supply to the soils of dry climates, and when we have this condition satisfied we can proceed to outline our



EFFECTIVE USE OF WATER PLANTS.

treatment for the production of floral displays.

Briefly, then, what we must do in connection with the growing of plants in a climate like ours, is to treat the soil as a reservoir for the storage of water, and then when we have provided such a reservoir, which may, by the way, take several years of time, to jealously guard against the loss of such water supply by the mulching of the surface, preferably by a soil mulch. The only loss of water from the soil should take place through the leaves of the plant and this loss we must allow if we are to grow healthy plants. Some loss of water through plant evaporation will take place, and if this were not so, we might expect to retain nearly all the water that gets into the soil by means of the mulch. The mulch will insure that the greater part of the water loss will take place through the plant.

Unfortunately, for our deduction, a lawn cannot be irrigated, but a healthy growth of grass in itself acts as a mulch and prevents the wind from readily removing the moisture from the surface of the soil. A lawn must be watered with the hose and for this purpose on large areas the two and a half inch hose used by the fire depart-

ment is perhaps the best way. Sprinklers that will thoroughly water an area with a diameter of sixty feet or more to a depth of several inches in the course of half an hour are now on the market and prove invaluable where it is desired to keep the lawn in first class condition. Some authorities will argue that watering a lawn induces the growth of wild or weed grasses, but, to my mind, a lawn answers its purpose in the landscape if it is green, no matter what its botanical composition.

The shrubbery borders can be treated in exactly the same way as the flower border. When water is applied it should be done thoroughly once in two weeks during the dry season and as soon as the soil can be easily worked the soil mulch should be re-established. Some method of watering other than sprinkling with the hose should be used. Many sorts of sprinklers can be used that in the course of an hour or so will thoroughly soak the soil and the time that this will take can be ascertained that each part of a shrubbery border can be given the same amount of water. By allowing a definite length of time for each setting of the sprayer the personal element can be eliminated. A system of underground pipes with spray nozzles at the proper distances apart are now on the market and should answer all the requirements. It should always be kept in mind that it is not necessary to water the same areas day after day. The theory should be to water thoroughly and then to protect the water by the application of the mulch. This factor should not be forgotten for upon its rigid adherence the success of the treatment depends.

So much for the treatment of the soil and the application of water. This, however, is not all. Many plants and a great many, do not thrive in a dry atmosphere, and even with plenty of water at the roots they either do not flower or in some other way prove unsatisfactory. Obviously the only thing to do with such plants is to eliminate them from floral displays wherever they cannot be given all the at-



GENERAL MASS OF YELLOW FLOWERED PERENNIALS.



PERENNIALS ON RIGHT; TROPICAL PLANTS ON LEFT.

tention that they require. There are plenty of other plants that do not require nursing that may be used. The system of elimination must be exercised if good flowering material is to be obtained year after year. We cannot depend for our displays upon those plants that do so well in other parts of the country, especially in those parts of the country where cooler weather prevails, and while they may do fairly well during a fair season they will almost invariably fail us when they are put to the supreme test of the hot, dry winds of the western prairie country. Such conditions would naturally suggest a flora to suit, and our failures in the past have been the result of trying to force upon our own peculiar conditions the floras of sections of the country that are totally different.

Tropical plants suggest themselves as the natural solution of this problem and experience teaches us that the tropical plants can be depended upon to produce results. The growth of the tropical water lilies is nowhere surpassed, and they, together with the foliage plants belonging to the low areas about pools and natural depressions, form one of the most delightful surprises in areas of little rainfall. The pools, if well made, require but a very small supply of water and give us a basis on which to work out our planting schemes. Cannas, caladiums and the castor beans give us an admirable background, and among the foliage plants that do well in the bedding schemes are *Achyranthus Bourbonica*, *Aculpha tricolor*, *marginata*, and *miltonians*, *Salvia splendens*, *Alyssum maritimum*, all the *Coleus*, *Phyllanthus nivosus* and *nivosus atropurpureum*, *Ageratum conyzoides*, the *Iresines*, *Salvia farinacea*, *Iantana delicatissima*, *Santolina*, the *Eranthemums*, the *Abutilons*, and *Cuphea ignea*, and *Plumbago capensis*.

Another class of plants that lend themselves particularly well to the requirements are the ornamental grasses. Too much cannot be said of their value in decorative work. Those varieties that we have found of use are *Miscanthus sinensis variegatus*, *Erianthus Ravennae*, *Panicum plicatum*, *Pennisetum cupreum*, *longistylum*, and *Rupel-*

lium, *Cortaderia argentea*, *Eulalia japonica zebrina*, and *Arundo donax*. *Cyperus alternifolius* also does well even when kept rather dry.

Perennial plants are the salvation of the plant grower under trying conditions. Owing to the establishment of a permanent root system, provided in many cases with a well developed storage system, these plants are particularly adapted to withstand long periods of drought. Among those that may be expected to produce recurring shows from year to year are the following, all of which have been particularly attractive during the past dry season. *Liatris spicata*, *Asclepias tuberosa*, *Salvia azurea*, *Physostegia virginica*, *Veronica Lettermanni* (a little known plant from the southwest), *Eupatorium ageratoides*, *Cassia Vesperi* (often confused with *Varylandica*), *Tritoma*, *Helenium Riverton Gem*, *Aster tataricus* and other varieties, many varieties of perennial phlox, *Coreopsis grandiflora*, *Anchusa italica* var. *Dropmore*, *Veronica grandis*, *Solidago canadensis*, and various *chrysanthemums*.

The above list of perennials is being supplemented with other varieties. The first year for the perennials is very apt to be at the sacrifice of flowers, for the transplanting seems in our hot climate to seriously hinder flower production, but this is more than offset the following year, when the growth made in the absence of flowers produces the second year crop. In fact, this

is much better for the plants, and it might be well to prohibit flower production the first season, if it is dry and hot, in order to give the plant a better chance to recuperate.

Perennials are better started in the greenhouse and transplanted after germination in all those soils where clay predominates. Small seeds do not readily penetrate the crust formed on clay after a rain and after being baked by the sun, and in the greater number of cases it is much better where practicable to grow the young plants inside. This is our custom here, and we find it productive of the best results. Annuals in general are far less satisfactory than the perennials for the reason that their root system is not strong enough to withstand the weather conditions. However, some few plants do seem to do exceptionally well in dry weather, when once they have become established. These are *Centaurea Cyanus*, *Impatiens Balsamina*, *Arctotis grandis*, *Petunias*, *Helianthus cucumeriformis*, *Orion*, annual *Delphiniums*, *Mirabilis Jalapa*, *Cleome gigantea*, *Encelia calva*, *Cosmos*, *Gomphrena globosa*, *Celosia Thompsoni*, *Antirrhinum*, *Verbenas*, *Nicotiana* and *Gaillardia*.

All plants grown under dry conditions are subject to the attacks of red spider, but the use of the full stream of the hose will do much to eradicate this evil. Many poor plants that have been discarded as unfit could have been saved if their caretaker had known the signs of red spider.

Another phase of the floral display problem in those localities where rain is far from plentiful is the use of desert plants. That this phase of the problem is an important one no one will dispute. The desert regions have many plants that after slight rains flower profusely, and these flowers that come and go so quickly are not lacking in colors, but take on some of the very brightest colors in the flower kingdom. We have much to learn from our desert floras and within the next few years we may expect to see our flower lists for the regions of the middle west considerably increased by the addition of the good plants from the desert regions.

RECEIVER FOR ROSEHILL.

As a result of the disastrous Lorimer bank failure in Chicago, which involved H. W. Huttig, president of Rosehill Cemetery and Charles B. Munday, former treasurer, both of whom are under indictment by the grand jury, a receiver for the cemetery company has been appointed, the court naming the Chicago Title & Trust Co. as receiver. In the indictments Huttig and Munday are charged with conspiracy to defraud the Rosehill Cemetery Company by substituting security of little or no value for good security and with embezzlement

of securities from the Rosehill Cemetery Company. The petition for the receiver was filed by the minority stockholders, who charged that the perpetual care fund was being misused by the officers of the company. Judge Foell granted the request and also took possession of millions of dollars in "scrip dividends" which had been issued by the cemetery company.

Rosehill is the first large modern city cemetery to admit a community mausoleum to its grounds, the mausoleum being nearly completed.



FRONT AND REAR OF CHAPEL IN GRACELAND CEMETERY, SIOUX CITY, IA.

SUCCESS IN PRIVATELY MANAGED CEMETERIES

A great many cities and towns that are contemplating the establishing of cemeteries are in doubt as to the most efficient and successful methods of organizing, developing and managing burial grounds. The old type of municipal cemetery is generally out of favor because it is often not well kept.

The privately owned cemetery, operated for profit with perpetual maintenance features, or the association or corporation that makes no profit, but puts all its surplus to the improvement of the ground, are both advocated and both successfully used. The conditions and problems connected with the organizing of such cemeteries to best meet the needs of each individual community have seldom been systematically studied with a view of ascertaining the principles on which cemeteries can be most efficiently organized and managed. In many communities private companies are being organized or planned to develop new cemeteries, and PARK AND CEMETERY is fre-

quently asked to advise as to the possible success of such enterprises.

There are many examples of successful privately managed cemeteries and many others, hastily organized by promoters of inexperienced people that have failed. Citizens are usually very willing to subscribe stock in an institution of this kind, provided that they may know that a fair rate of interest may be expected and that the town will be given a really creditable institution. The history of privately owned cemetery companies has been the same as the history of other private business enterprises. Some have failed and some have made good. The reasons in nearly every case have been individual and local, and it is practically impossible to generalize as to the probable success of such ventures. The first thing to determine, of course, is the need for a cemetery in the community, and the next is the ability to develop the best possible under the local conditions and

with the land available. The selection of the land and the planting and platting of the ground should be studied by cemetery landscape architects of long experience and the grounds developed and managed by a trained cemetery executive. In no other way can a privately owned cemetery be made a success. The development of a cemetery is a highly technical business enterprise and one that demands a high type of expert knowledge, experience and executive ability.

One of the most conspicuous examples of a privately owned cemetery that has been successfully developed in a very short time in a typical city of medium size is to be found in the history of the Graceland Cemetery Association, of Sioux City, Ia. This company was organized four years ago, purchased 130 acres of ground, and set about the development of a modern, lawn-plan cemetery that should have every feature of careful management and skillful develop-



ENTRANCE, GRACELAND CEMETERY, SIOUX CITY, IA.

ment. Twenty acres were laid out for use at first, and the cemetery has met with the best favor and patronage of its community from the start. Up to the present time about \$201,000 worth of lots have been sold and a perpetual care fund of \$53,000 accumulated. There are now twelve hundred interments in the grounds and much creditable construction work has been done. To make the cemetery easily accessible the company built at its own expense three-quarters of a mile of paving to connect the grounds with city streets. A six-inch water main has been laid from the city and convenient access is had to the water supply from every division of the ground. All the roads are oiled and liberal expenditure has been made for planting throughout the grounds. A handsome monumental entrance and gateway has been erected and an office and rest room of pleasing design has been built at small cost. The handsome marble chapel that occupies an imposing location in the center of the grounds, illustrated here, is an unusually handsome

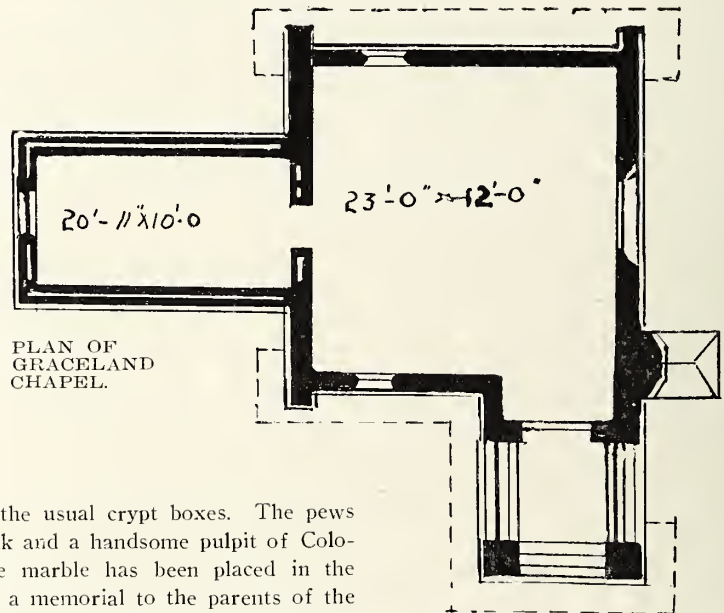


OFFICE AND SHELTER, GRACELAND CEMETERY.



THE MARBLE PULPIT AND ENTRANCE TO RECEIVING VAULT.

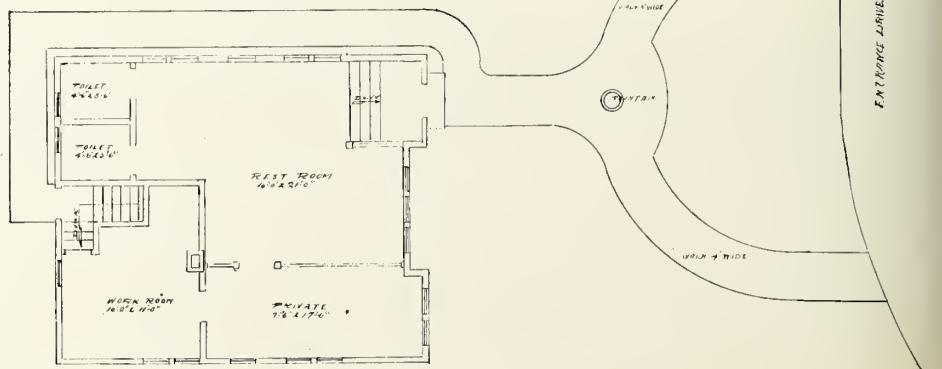
piece of gothic architecture and is one of the handsomest buildings for its purpose in a cemetery of its size in the country. The exterior is of Colorado-Yule marble in carborundum hone finish and makes a very striking feature of the landscape from its site on a hill which gives a view of the country for eight miles around. The building is 23x21 feet in ground plan, with the receiving vault in the rear 20 feet 11 inches by 10 feet, and a porte cochere at the entrance 10 feet square. It has a green Spanish tile roof, and the interior is finished in plaster and heavy beam work. The entrance to the receiving vault is closed by Tiffany bronze doors and the interior of the vault, which has a capacity of twenty-four bodies, is of marble and furnished with bronze brackets to hold the casket, in-



PLAN OF GRACELAND CHAPEL.

stead of the usual crypt boxes. The pews are of oak and a handsome pulpit of Colorado-Yule marble has been placed in the chapel as a memorial to the parents of the superintendent, A. M. Jackson. This is a gift of Mr. Jackson. The total cost of the building was about \$24,000.

The main entrance is a very simple but massive design executed in stone posts and iron gate. The posts are of Bedford stone and are 2 feet 6 inches at the base and the



PLAN OF OFFICE AND APPROACH.



BED OF DUSTY MILLER, WITH SPRINKLING FOUNTAIN BUILT INTO IT.

smaller posts at the side passages are 2 feet in diameter. The main drive is 20 feet wide and the walks 4 feet wide. The large posts are 8 feet 6 inches high and the small ones 6 feet.

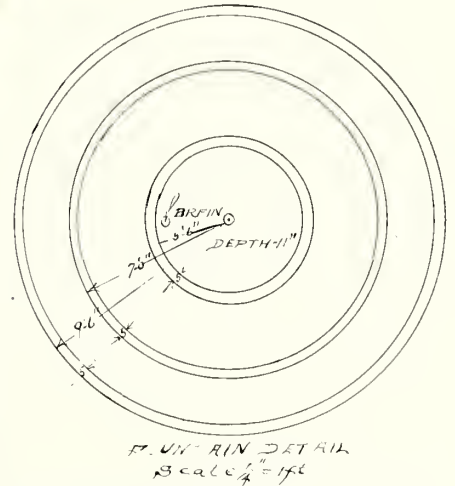
Immediately to the right of the entrance is the office and rest room, a very serviceable little building of stucco, erected at a cost of \$2,500. This building is 25x30 feet in ground dimensions and includes a rest room 16x21½ feet, private offices, workshop and toilet. A bed of cannas is planted in front of the door and English ivy is growing on the walls. The rest of the planting about the building and in the rear

include spiraea, tartarian honeysuckle, hydrangea, tamarix, syringa, lilacs, pea trees and flowering currants. Our plan shows the arrangement of the building and its approaches.

One of the interesting features of the grounds is the method of watering the flower beds by means of sprinkling fountains of concrete, built inside of the flower bed, and when the flowers are in bloom, entirely invisible. There are twenty-five of these, placed at different locations throughout the grounds, in connection with the regular water system. One of our pictures shows a well planted bed of dusty miller

with this fountain inside of it, and another picture shows the fountain construction without the planting. The cement curb that borders the fountain is 5 inches thick and the rings of the fountain are, respectively, 7 feet 6 inches, 14 feet and 19 feet in diameter. The cost of one of these fountains, finished complete, was about \$100.

Graceland Cemetery was planned and laid out by S. W. Rubec, superintendent of Riverside Cemetery, Marshalltown, Ia., and has been developed and managed by the



PLAN OF SPRINKLING FOUNTAIN FOR FLOWER BED.



SPRINKLING FOUNTAIN FLOWER BED BEFORE PLANTING.

present managing trustee, A. M. Jackson. The other officers of the company are: President, E. C. Peters; vice-president, A. T. Bennett; secretary-treasurer, C. Shumaker. The chapel was designed and executed in Colorado-Yule marble by the Colorado-Yule Marble Co., of Marble, Colo. The iron fence and entrance gate, including one mile of fence 70 inches high, were furnished by the Van Dorn Iron Works Co., of Cleveland, O., and the sprinkling fountains were furnished by Orcutt Bros., of Sioux City. The posts at the entrance gate were erected by D. W. Rapalee, of Sioux City.

HINTS ON BUILDING FOUNDATIONS

Address before Canadian Cemetery Association, by G. J. Emery, Supt., Fairview Cemetery Niagara Falls, Ont.

When going through a cemetery, what is more unsightly than to see monuments leaning at all angles from the perpendicular. The only sure way to overcome this is to build the foundations deep and substantial. In my judgment the proper depth is six feet. Some will say this is not necessary in the erection of a small monument, which may be true, providing you were sure the ground in close proximity was not to be disturbed, but in every cemetery, particularly in the older ones, graves are placed as close as possible and oftentimes it is necessary to open a grave immediately adjoining the monument, which proves the desirability of a six-foot foundation and the saving of time and labor.

The material used in the construction of

foundations will vary somewhat, according to the particular locality. Where gravel can be secured, it is much preferable to sand and stone. The proportions are six of good, clean gravel and one of Portland cement, or five of stone, three of sand and one of cement. In large foundations building stone can be imbedded in the concrete, but great care must be taken to see that each stone is well covered, especially on the outsides of the foundation.

Do not allow monument men to level their monuments with slate, spawls or similar material. Insist upon the bases being laid in a solid bed of concrete, so that all parts of the base will come in contact with the foundation.

Last year the City Council passed a by-

law providing that foundations shall in all cases be put in and corner posts placed by the caretaker of the cemetery, and the following charges payable to the city clerk for the general use of the city, at or before such foundations or corner stones are put in, namely:

For concrete foundations, 20 cents per cubic foot.

For placing each corner post on lot, 12½ cents.

This arrangement has worked out very satisfactorily to both the monument men and myself. By following these few simple suggestions, I am of the opinion that the difficulty with foundation work will be reduced to a minimum and the beauty of cemeteries greatly enhanced.

HANDLING THE CEMETERY PATRONS

*An address before the Missouri Cemetery Improvement Association,
by J. A. Schmiemeier, Supt., St. Matthews' Cemetery, St. Louis, Mo.*

It is to our own interest to do everything in our power to obtain and hold the approval and good-will of the board; but it is not always the best policy, in the interest of the cemetery, to work solely and exclusively to have the board's approval when, in our better judgment, a deviation from the trodden path would be in the cemetery's interest. It would be our duty to familiarize our employers with facts and conditions. We should point out the way, but remain in the background; arouse their pride and seek their co-operation. Progress might be slow, but common sense and perseverance would bring success, and success would strengthen confidence in our ability; increased respect would be ours; future suggestions would find a willing ear. We should never try to force matters by employing means unworthy of a man. We must aim to be in harmony with our officials, nourish their pride, create an ambition for betterment, keep our self-respect and the even tenor of our way in everything that is good and noble. We must work, think, study and strive for our cemetery, and we will find the approval of our boards, that of our conscience, our patrons and the public.

In handling the public we should never forget that it is composed of individuals. Sooner or later we cemetery people will have dealings with the individuals of this public. We should handle all with courtesy, treat them gentlemanly, create their respect for us and establish in their minds the fact that we are decent, honest, well-bred men, ever ready to be lenient with their shortcomings and quick to acknowledge good manners and behavior, and to welcome their presence when their good demeanor justifies us to do so. One feature that taxed our self-control to the limit at times is the so-called mob-gathering that congregates at the cemetery when some prominent citizen is buried—conspicuously so on Sundays. Since the Sunday funerals, however, have been abolished in St. Louis, very little trouble has been experienced in this line. Never lose your temper. A cemetery man cuts a very sorrowful figure when he loses his self-control in view of hundreds of people. By courteously appealing to them in a manner calculated to arouse their sympathy and by requesting them to respect the dead and the sacred place where they rest, we will usually obtain the desired results.

The handling of our patrons is really the most important part of our subject. Success or failure largely depends on the manner, method and knack of the cemetery man. The first impression we make is usually a lasting one. The cemetery man needs an abundance of tact, common sense and courtesy. In greeting the prospective

patrons we should not fail to extend our sympathy. Interest in the departed, his or her family, will usually be welcomed by the patron to be. Still, exceeding care must be exercised not to transgress certain boundaries. We should never become inquisitive. The little trip to the place where the lots for sale are located will give ample time to elicit such information as is needed to direct us to lots that will suit and fill the particular wants.

Truthfulness in our statements must be our guide. Never say anything that, later on, we are unable to back up, nor ever take any advantage of the patron's present state of mind. Things necessary for the buyer to know should be explained in detail. Attention must be called to certain customs and usages in vogue. Valuable information for the future can usually be gleaned on the trip back to the office. Let the buyer leave with the conviction that he has had dealings with an honest, straightforward, sympathetic man. If we succeed in gaining his or her confidence we will probably have easy sailing afterwards.

In the large cities many people bury in the single-grave section, or public grounds, even when they are abundantly able to purchase a lot. This section might be designated as the real, genuine republic of the dead. The pauper and the well-to-do are here buried side by side. All are treated alike. It matters not whether the deceased is followed by many mourners or whether he is brought out to the cemetery in a manner described by the poet when he says: "Rattle his bones over the stones, for he's a pauper whom nobody owns." A large percentage of my burials would have no ceremonies performed were it not for the writer of this paper. The request is usually made to say a few words and a prayer. This is at times a very delicate affair and requires caution and tact. The meager information gathered in a hurry is practically all one has to be guided by. All that is said must be true; still, many things true should and must not be said. Never judge, but leave judgment to Him who is the only just judge. If one has succeeded in saying the appropriate thing at the right time, he has performed a good service for the people which they will remember. From that time on they are friends and a large part of their confidence has been gained. It paves the way in doing business with them later on.

And now the business end of our work has arrived. We must all live. In managing a cemetery there are two ways of doing it—the salary and the commission basis. The former is usually pursued when the receipts justify it and adopted when the indications favor it. Nearly all the large cemeteries follow it. The other

method is to elect or appoint a sexton or superintendent, giving him carte blanche to make out of it what he can, on the principle of "Root, hog, or die." In the majority of cases the "hog" will root, and root for dear life.

This plan will force the man on the cemetery to employ all his energies and skill, not only to make "both ends meet," but to try to "make hay while the sun shines." It forces him to employ methods and means pleasing and satisfactory to his patrons, otherwise they can get "back at him" by withdrawing their patronage. If he has ability and knows how to handle the people to get the business and to hold it, he will probably have success.

He can take advantage of many so-called knick-knacks, such as selling flowers, decorating graves on various occasions, such as on birth and death days, Christmas, Easter, Decoration Day, etc. He may even be lucky enough to have a dollar now and then slipped into his pockets after a burial ceremony performed by him. By doing his full duty and perhaps just a little more, he will acquire friends who will assist him very materially in inducing their friends and others to also put their lots in his care.

The spirit of betterment and improvement will be aroused. However, his own work must be his main solicitor. It must be his aim to get as many lots under his care as possible, on the principle that if the lots are cared for the cemetery will take care of itself. One advantage for the sexton or superintendent in this manner of managing a cemetery is his independence. He is not hedged in by strict accounting to his board for all moneys received and expended, nor for everything he does or leaves undone. He can use his own judgment and act unhampered in a greater degree than his brother under the salary basis.

The main drawbacks of this system are the uncertainty of the revenue and the certainty of the expense and the fickleness of the public. The whole thing is more or less based on the good-will of the people. By having and holding that, he will be able to accomplish much; by losing it he will be sorely handicapped and might as well give up his job.

In conclusion: The art of handling the people is the basis of success in all public and quasi-public affairs. The cardinal principles at the bottom of it are the same that underlie every successful and enduring undertaking.

They are hard work, justice, fairness, honesty, uprightness, self-control and good-will. If these are the basic principles of our life we are bound to succeed in our dealings with our fellow-men.

ASKED AND ANSWERED

An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

Sealing Concrete Burial Vaults.

There is a preparation in the market called "Arco Sealit," manufactured by the Atlantic Refining Co., Cleveland, O., which is highly recommended for sealing burial cement vaults. It sticks to the most highly polished surfaces; it is in a somewhat soft condition; it is waterproof, can be used in hot or freezing weather for stopping any kind of leakage in cisterns, roofs, etc. Did you ever hear of same, or are there any cement men or cemeteries where same is used? What is the best method of sealing cement burial vaults in hot or freezing cold weather? Is there any other material in the market to be used in sealing vaults besides cement?—C. S., Kan.

In sealing our cement vaults we fill space between wall of grave and vault with cement and bed the top in cement and cover the top with about two inches of fresh cement.

A. J. GRAVES,

Supt., Bloomington Cemetery.

Bloomington, Ill.

In very hot weather, when the cement used for sealing burial vaults sets rapidly, a little sheet glue dissolved in the water before making the cement has a tendency to retard the setting process. Put just enough glue in the water to make it feel a little slippery to the hands. In freezing weather a little salt added to the water before making the cement will prevent freezing. Or, if convenient, heat the water before mixing the cement and then use at once, since the hot water has a tendency to cause the cement to set rapidly, and the water begins to cool as soon as the cement is applied to the cold surface of the vault, so that the hardening of the cement will not interfere with the work of sealing the vault.

A still better method is to use the automatic sealing cement burial vault. For burial purposes the automatic sealing feature eliminates this trouble of having to use cement in either hot or cold weather to seal it.

This vault is manufactured from our adjustable steel moulds, and those who have this troublesome feature to contend with in sealing vaults will do well to investigate this vault. We use our own waterproofing preparation that has been thoroughly tested and tried out on our own automatic sealing cement burial vaults. This is put up in five-gallon cans at \$1 per gallon, and we supply nearly all of our manufacturing plants throughout the country with their waterproofing.

AUTOMATIC SEALING VAULT CO.

Peru, Ind.

We are sending Toch Brothers' booklet on Toxement waterproofing, which densi-

fies and waterproofs concrete, cement mortar and cement stucco. It is also used in cement wash as per circular herewith enclosed.

On page 16, of the booklet please note that Toxement is used as a bond in the proportion of five pounds Toxement to the bag of neat Portland cement (no aggregates) and six gallons or more of water to make a sloppy paste. This is used as a grout to join new and old concrete. The grout is used directly ahead of and in connection with cement mortar laid on cement burial vaults before placing the top in position. It is necessary to wet the concrete construction top and bottom before using the grout and laying cement mortar. Concrete construction should have to be broom-scrubbed free from dirt before using the Toxement bond, which will make a tight joint between the additional construction where work is left from day to day or longer.

Owing to the lack of care for small details to produce proper results, we beg to advise you that if Toch Brothers' Liquid Black R. I. W. Marine Cement, as per page 23 of the R. I. W. Red Book, is used in a heavily pitched coating on the dry surface of the cement burial vaults and permitted to set a day or so, that the cement mortar does not absorb the liquid too much, and paint the flange or edge of the top of the burial vault precisely the same, this will bond with the cement mortar to join the two pieces of construction together.

As a matter of safety, Toch Brothers' R. I. W. Liquid Black Marine cement can be painted all around the edges of the joints and stick cotton cloth (unbleached muslin) to the wet R. I. W., also coating in the laps of at least 6 inches, the cotton cloth lapping some inches on the vault and over the top. A heavily pitched coating of the R. I. W. Black coating is to be applied over the surface of the cotton fabric to fully cover the mesh. This might be repeated with another layer of cotton fabric and R. I. W. Black. If the concrete burial vault is not waterproofed we should advise that two coats of Liquid R. I. W. Marine cement be painted entirely over exterior surface, including the bottom, and to be coated over the top to prevent seepage through the concrete construction.

However, if Toxement is used in proportion of two pounds and not over three pounds to the bag of neat Portland cement, well turned therewith before aggregates are added, this will waterproof the burial vault and top thereof.

R. I. W. with cotton fabric reinforcing connecting the vault and the top will protect against cracking of the cement mortar. The cement mortar should also be densified

and waterproofed by 3 per cent of Toxement to the cement unit.

Hill & Woltersdorf, architects, of this city, used the R. I. W. system for a sarcophagus holding the remains of a former minister representing this government at the Russian court. The architects had promised to look after this matter when necessary, stating that the work was so well done that no moisture could penetrate the interior.

R. I. W. Liquid Black Marine cement retains its resiliency when bedded in. We should suppose that most persons are desirous of spending sufficient money to get waterproofing results, and amount of material required does not cost as much as the labor in connection with it.

We are always pleased to hear from you, and with thanks for past favors.

THE GARDEN CITY SAND CO.

Chicago, Ill.

As regards the sealing of burial vaults, we understand that all the manufacturers specify ordinary Portland cement mortar and we know of no other substance being used. It impresses us that it would be possible to use tar or asphalt in cold weather, when there would be danger of injury to cement mortar on account of freezing. It would, of course, be necessary to have the material melted and kept in a liquid state until the vault was ready for sealing. ATLAS PORTLAND CEMENT CO.

Chicago, Ill.

We use a sealing acid called Bondsit. We have been using this for several years. We purchase it from the Maumee Chemical Co., Toledo, O. We have found it altogether satisfactory and use it in the following manner: About a tablespoonful of acid is dissolved in a quart of water. Then the solution is applied to the inner edge of the vault and outer edge of the cover with a brush about half an hour before the sealing is to be done. When the cover is placed on the vault it is sealed with cement mixed thin enough to pour. A very small bit of Maumee waterproofing compound is mixed with this. It is then smoothed over with a trowel in order to finish up the appearance.

NORWALK VAULT CO.

Norwalk, O.

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Cleaning Monuments in the Cemetery.

Editor Asked and Answered:—What is the best preparation for cleaning granite and marble in cemeteries to be used on stones that have been placed for some years?—Cem. Assn., Me.

You can buy preparations for cleaning granite and marble and get instructions for doing this work from either one of the following firms: Harrison Supply Co., 5 Dorchester avenue extension, Boston, Mass.; Cross Brothers Co., Northfield, Vt.; Quincy Avenue Granite Co., 48 Penn street, Quincy, Mass.

UNIQUE ENTRANCE to TACOMA'S GREAT SCENIC PARK

Point Defiance Park at Tacoma, Wash., is perhaps the most naturally beautiful and picturesque park in our country. It consists of 637 acres on a point of land north-west of the city, with a water frontage on Puget Sound of $3\frac{1}{2}$ miles, and is from 100 to 300 feet above tide level. In the issue of August, 1912, was an article explaining the proposed changes, improvement and future development of this park, with extracts from the reports of and illustrated by plans and drawings prepared by Hare & Hare, landscape architects, Kansas City, Mo.

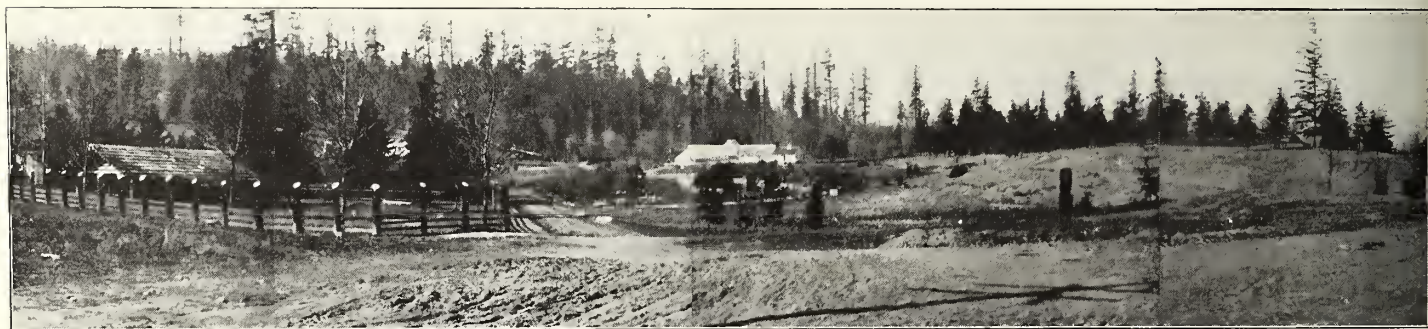
These plans called for the recognition of three main divisions of the park. First, the portion cut off by the street car, which is to be developed as an athletic field, with

the development is limited to roads and paths, with additions of native plants in places, and clearings in other places for picnic grounds.

The work the past two years has been mostly concentrated in the second division, the portion surrounding the entrance and the zoo. This work has proceeded in accordance with the plans of the landscape architects under the personal direction of Geo. A. Hill, the superintendent of parks, with results most satisfactory to the people of Tacoma, who have closely watched the change. The first picture will give an idea of conditions when work began. The roads, paths, buildings and animal enclosures had been located from time to time

grades adjusted, and a simple, unified treatment of roads and lawns developed. The planting, of course, will require some years of growth to show the effects proposed. The greenhouse seen in both views is to give place in the future to a large animal house, the main building of the zoo. This building will be the dominant feature of this expanse of lawn.

On the point of land to the right will be another important building of the zoo. This site is on the axis of the main street approaching the park. The remaining zoological arrangements will be on the higher ground to the left. The large trees forming the background of the picture are in the natural portions of the park. The pond



ENTRANCE TO POINT DEFIANCE PARK BEFORE IMPROVEMENT.



ENTRANCE TO POINT DEFIANCE PARK AFTER IMPROVEMENT.
Hare & Hare, landscape architects.

a small portion devoted to service buildings, greenhouses, etc.; second, the portion including the entrance and zoological buildings, to have the highest ornamental development; and third, the wildwood, where

by various people, with no general scheme in mind, and the result was haphazard. The second picture shows the result of two years' work, the poorly located buildings, pens, paths and walks eliminated, the

which forms the center of the concave lawn has undergone some change in size and form and now presents an attractive display of beautiful water lilies and aquatic plants.

GROUPING OF CEMETERY ENTRANCE and BUILDINGS

A most interesting grouping of administration buildings and entrance has been developed at Wyuka Cemetery, Lincoln, Neb., where the office and superintendent's residence, placed on opposite sides of the entrance drive, are connected by balconies extending over the driveway.

A wide curving parked approach to the entrance also adds much to the impressiveness of the general effect.

The entire distance across the entrance, including the width of the two buildings, is $146\frac{1}{2}$ feet, the porches and drives including about 60 feet. The residence is 45x45

feet and the office 42x32 feet. The buildings are of brick and stucco, with oak interiors, are of very attractive architecture and well arranged for their respective uses. The buildings cost about \$43,148 and were designed by Architect L. A. Lamoreaux, of Minneapolis.

The parkway that may be seen in our picture in front of the buildings includes a space of about 250x207 feet. The buildings are well set off by planting, made up principally of the following trees and shrubs: Blue spruce, Austrian pine, mountain ash, arbor vitae, cedar or juniper, spiraea, lilac, dogwood, syringa, hydrangea, snowballs

and forsythia. The vine on the buildings is *Ampelopsis Veitchii*.

Another interesting view in Wyuka, shown here, is the receiving vault and several private mausoleums on one of the brick-paved drives.

The vault is built of stone and has a capacity of twelve bodies. The cemetery expects in the near future to build a new vault and chapel. There is 135 feet of brick paving 18 feet wide in the cemetery. The rest of the drives are of cinders, although it is the intention soon to rebuild them with concrete or asphalt.



ENTRANCE TO WYUKA CEMETERY, LINCOLN, NEB.

The cemetery has a total of 120 acres, with 40 in use. The chief improvements of the past two years have been the adding of new ground and extension of green-

house. They have paid for new lands \$13,400 and are now improving twenty acres with planting, putting in drives and a water system.

The officers of the cemetery are: G. W. Bonnell, president; George Ruff, superintendent; J. H. Fawell, secretary; P. L. Hall, treasurer.



WYUKA RECEIVING VAULT, AND PRIVATE MAUSOLEUMS.

USING THE UNEMPLOYED IN THE PARKS

Hartford, Conn., has recently voted an appropriation of \$2,500 for trying out the plan of providing employment for those out of work in the city parks, and has placed the matter in the hands of George A. Parker, superintendent of parks.

Mr. Parker has prepared the following regulations governing the work:

1. The superintendent to report to his honor, the mayor, and to the president of the board of park commissioners each Monday, the number of men employed, the number of persons dependent upon them, and the amount paid to each, also the park or place where the work was done, and the amount expended on each park.
2. No person to be employed under this resolution after Saturday, March 27, 1915.
3. The maximum pay to be twenty-five (25c.) per hour.
4. The skilled workmen who act as leaders may be employed eight hours per day, but not more than one leader to a crew if less than ten, nor more than one leader to ten men if the crew exceeds that number.
5. The maximum time for all other workmen to be four hours per day.
6. The standard of work to be not less than 60 per cent. of efficiency. If a workman falls below that he may be dismissed.
7. Employment under this resolution to be restricted to residents of Hartford during the previous six months or longer. Applicants must establish such residence by the city directory, voting list or by acceptable reference from well-known citizens.
8. Preference will be given to applicants, as follows:

1. To men with dependent families and minor children whose means are or will be exhausted before April 1, if they do not obtain work.
2. To men who are usually employed during the winter.
3. To men who have been employed more than three-fourths of their time during the present year.
9. Dismissals may be made for intoxication, profane or indecent language.
2. To give place to men who are in greater need, or have more people dependent upon them.
3. For false statements when making application for work.
4. For inefficiency or trouble making.
10. Applications will only be received at the former office of the superintendent of parks in West Bushnell park, and will be filed consecutively. Appointments will be made in the order of filing, subject to the rules of preference as stated above.
11. Wages will be paid daily, if desired, at the office of the city treasurer between 9 and 3 p. m., where a continuous payroll will be kept not more than one day in arrears.
12. All records of a personal character to be destroyed on or before April 1.
13. These rules may be temporarily suspended or altered at any time when, in the judgment of his honor the mayor or the president of the board of park commissioners, a better equity or efficiency will result.

FORM OF APPLICATION.

Following is the application to be signed:

- Number Date.....
1. Name in full Age.....
 2. Residence, street and number during 1914.
 3. By whom employed and work done during 1914.
 4. How many days out of work this year.
 5. How long since you had work.
 6. Number in family dependent upon your wages.
 7. Number of children under 16 years old.

8. Number of children working where wages.....
9. Do you need this work to sustain yourself between now and April 1?
10. Will you seek for, and, if possible, obtain other work?
11. Are you a voter?
12. References:

Remarks.

Answers to all these questions are needed in order to determine employment under resolution of city council of November 23, 1914. A failure to answer any question will delay decision regarding your application. Any false statements will cause dismissal.

All records concerning applications will be confidential, not given to the public, and destroyed on or before April 1, 1915.

The superintendent of parks will each day be at the office in west Bushnell park to receive applicants between 10 and 11 a. m. and applications will not be received at any other time or place. None will be received at No. 49 Pearl street.

Applicants must apply in person.

The project is somewhat in the nature of an experiment by the Common Council. If a month's trial proved its value it was likely that three other similar appropriations would be made, the idea being to divide the total \$10,000 during the three months.

The men will be employed in Rocky Ridge, Goodwin and Riverside parks. The work will consist largely of grading and shoveling.

DEVELOPING DENVER'S UNIQUE MOUNTAIN PARKS

In many respects the park system of Denver is unique in its scenic attractions and unusual problems of development. There are thirty parks with a total acreage of 1,238.91 within the city limits of Denver. Outside the city are the mountain parks.

The entire Park Department, under commission form of government, which prevails in Denver, is under the Commissioner of Property, who appoints the five members of the Board of Park Commissioners having direct charge of the department.

The board has complete supervision of the parks and playgrounds, not only within the corporate limits of the city, but also of the mountain parks. In 1913 the special levy was 1.9 mills for general park purposes, amounting to \$256,096.87. The levy for mountain parks purposes was ½ mill, amounting to \$63,252.29. The total valuation of parks, exclusive of improvements, as given by the auditor, is \$5,598,000.

Contrary to general belief, the Denver mountain parks system is not confined exclusively to the lands owned for park purposes, for road construction forms a very important factor in the general term "mountain parks." Roads built by the park commissioners pass between privately owned and government owned properties, as well as the lands owned by the city. In 1910 a committee of the Chamber of Commerce began work on the mountain park idea. For a year the committee worked,

outlining the plans, for it was necessary for the taxpayers of the city to vote a mill levy for acquiring the parks and building roads, and to establish a tax that meant a sum of money coming in annually, exclusively for the mountain parks. It was also necessary for the state legislature to authorize the city to acquire lands outside the corporate limits for park purposes.

Frederick Law Olmstead was engaged to go over the mountains and to make such suggestions as he deemed necessary, and after he had made a thorough investigation he recommended certain roads, the purchase of certain tracts to insure the freedom of the people for picnic grounds, the opening of bits of forest for the vistas and the purchase of certain tracts for the view afforded or for some special bit of scenery.

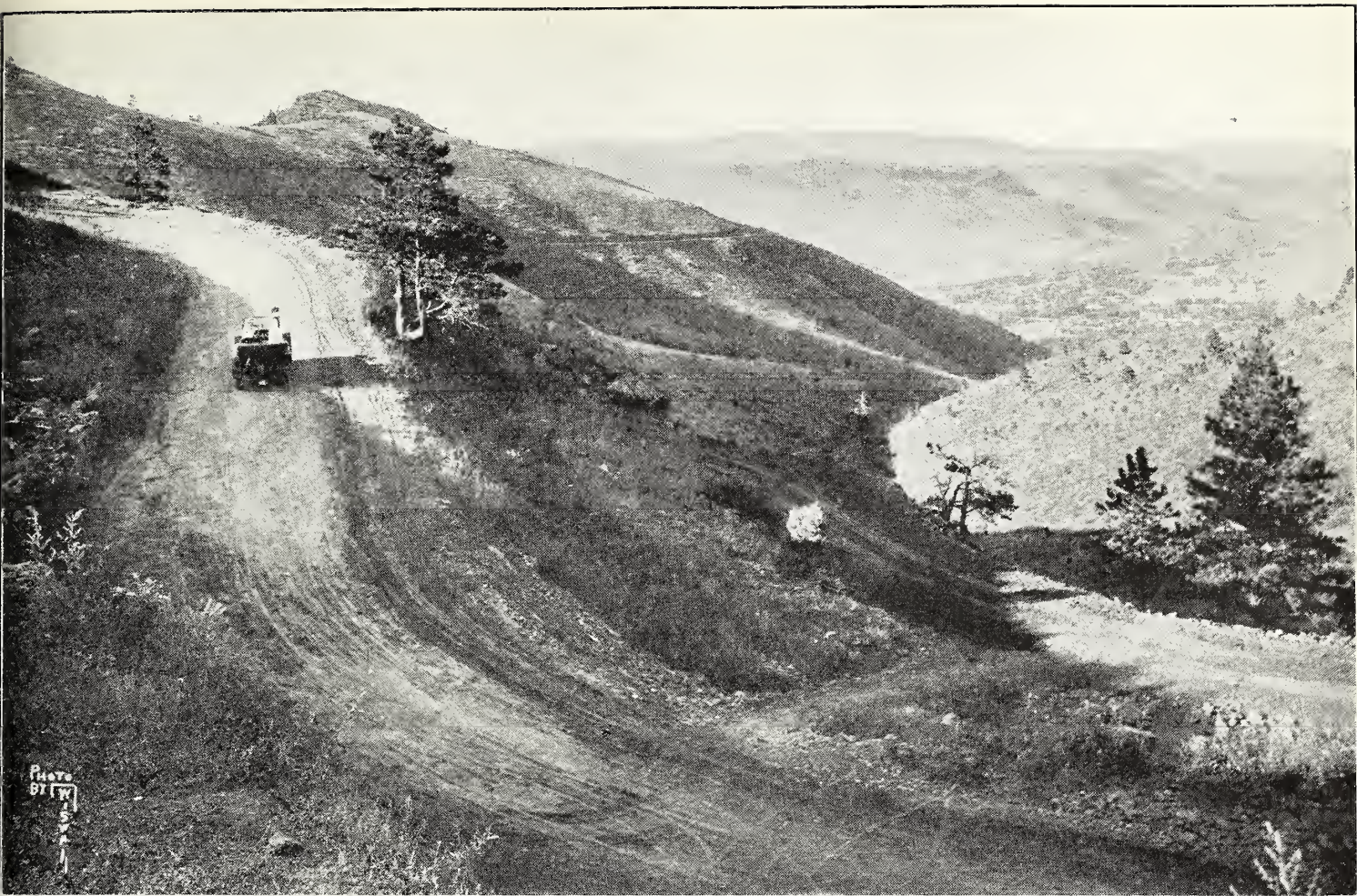
The central part of Mr. Olmsted's plan, however, was the construction of roads of easy grades over and around the mountains and into the valleys, connecting the various scenic points and thereby affording an easy means of reaching the then inaccessible parts of the mountains lying twelve miles from the city limits. Mr. Olmsted recommended the purchase of Genesee Mountain, comprising 840 acres, which was done at a cost of \$10,250, while L. M. Ralston donated 45 acres and J. N. Hess donated 15 acres.

The park commissioners have under con-

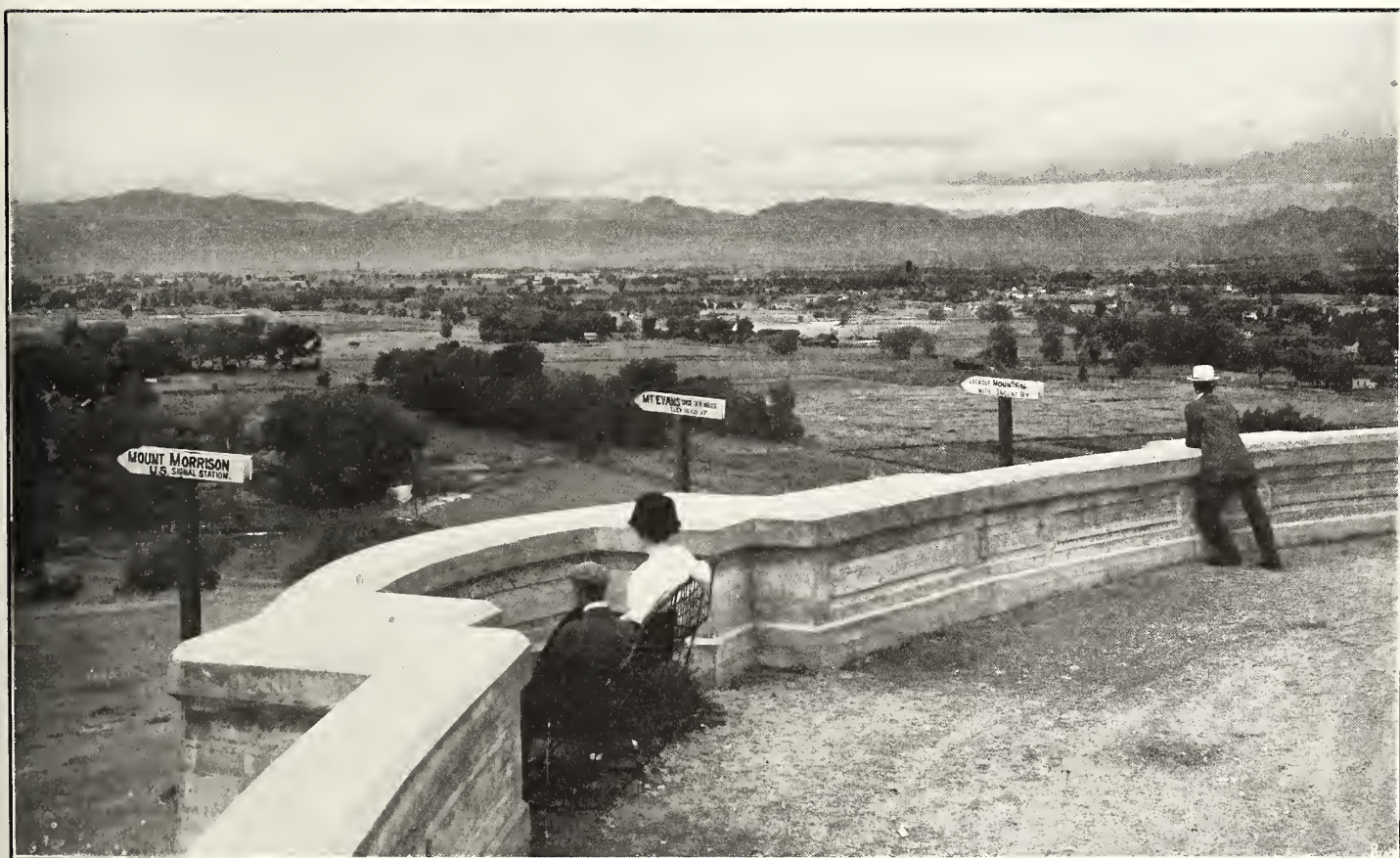
sideration several tracts that will add to the system, while it is expected that the government will grant to the city approximately 7,160 acres of land at \$1.25 per acre that will form one of the most gorgeous and rugged playgrounds in the world, to be connected with high-class roads, easy of grade and therefore easy for the lightest automobile to negotiate. The 7,160 acres mentioned lies scattered over a wide area of country and embraces forests, valleys, rugged rocks, peaks, canyons and gorges, all of which will be opened by the commissioners by the construction of roads.

The road construction forms, perhaps, the most important factor in the mountain parks. The construction is left to Frederick C. Steinhauer, general superintendent of the Park Department, and all construction, while done by contract, is under his direct supervision. Jefferson County, in which the parks are located, contributed \$7,500 in 1913 toward the roads, the commissioners \$7,500, and the State Highway Commission \$17,500, making a total of \$32,500 for road work in 1913.

Two separate grading camps were established and working from two ends a magnificent twenty-foot highway was built in 1913, traversing Lookout Mountain, immediately back of Golden, and extending to Genesee Mountain, which is owned by the city. Practically all of the road from the valley to the summit of Lookout Mountain



PANORAMIC VIEW FROM LOOKOUT MOUNTAIN ROAD, DENVER MOUNTAIN PARKS.



VIEW OF 200 MILES OF THE ROCKIES FROM INSPIRATION POINT, DENVER.

was blasted out of solid rock. Four miles beyond Lookout Mountain is Genesee Mountain, to which place the road is now complete, while a road was built not only to the summit of Genesee, but a second road winding around it to the valley.

The grade of these mountain park roads is a maximum of 6 per cent, most of the construction being 5 per cent, or six or five feet rise per 100 feet. To accomplish this the road up the mountain twists and curves like a serpent, with hairpin curves, verging on the edge of precipices and constantly unfolding views of surpassing splendor of mountains and valley and of the plains that stretch away to the skyline in the east.

Safety has been considered in all road work, the roads dipping to the inside, while eventually safety walls or rails will be added at the more dangerous places.

The development and maintenance of the

mountain parks comes from a separate fund, with a special levy, and approximately \$65,000 was raised in 1913, and in 1914 approximately \$100,000.

Inspiration Park forms one of the striking features of Denver's parks, and is not duplicated anywhere else in the United States, and possibly nowhere else in the world.

For more than three years the park commissioners were engaged in securing the land, including the special point desired and a strip of ground to connect it with Berkeley Park. The twenty-five acres thus bought in 1909 cost \$8,000. In July, 1909, actual work on Inspiration Point was begun and was finished in the summer of 1910. The Point is constructed of a concrete retaining wall 700 feet in length and from 6 to 18 feet in height. It is 200 feet above Clear Creek at its base, and is 228

feet above the Civic Center, which is a mile above sea level. On the Point is a 70-foot roadway and a parking for automobiles and vehicles.

From Inspiration Point is obtained one of the grandest mountain views in the country. The eye sweeps the Rockies from the Spanish Peaks, below Trinidad, to the Rockies in Wyoming, a distance of more than 200 miles. More than twenty peaks are visible, including Pike's, Gray's, Long's and others known the world over, with hundreds of smaller mountains, some clad in everlasting snow, some rearing their bald heads far above timberline, and others clothed in timber and verdure. Between the Point and the mountains lies the wonderful Clear Creek Valley, with its orchards and gardens and farms, and its suburban homes, forming one of the most attractive pastoral scenes in the West. Back of the Point is the city and Berkeley Park.

BETTER WORK IN PRACTICAL TREE SURGERY

Within the last decade there has been a great increase in demand for surgeons to repair decaying shade trees, but the possibilities of practicing fraud in this profession, like the instance just cited, have tempted so many unreliable people to dabble in the science that tree surgery has fallen somewhat into disrepute. The U. S. Department of Agriculture realizes that commercial tree surgery should occupy a high place in the estimation of the public, and has recently issued a pamphlet entitled "Practical Tree Surgery," wherein suggestions are made for improvement along these lines. When a serious blight such as the chestnut bark disease infects the trees of a district, the community or individuals in it will often spend considerable money to control ravages which may rob the whole district of its trees. An affection like the chestnut bark disease is contagious. It requires scientific knowledge of the disease to know whether an affected tree should be destroyed at once or is worth treating. It requires scientific training to understand the manner of growth of the fungi causing the disease and what treatment is best.

Besides the careless filling of decayed cavities in trees, there are other practices of certain so-called "tree surgeons" that do the trees more harm than good. Many of these "surgeons," as well as the people who employ them, do not realize the danger arising from fresh injuries to a tree. The tree owner should realize that prompt attendance to fresh injuries will largely do away with the need of tree surgery fifteen or twenty years hence. The tree surgeons must realize that if they make fresh injuries in the living bark, when treating decayed portions, they are laying the tree open to more dangers of infection that will result in further decay.

Just as a person is subject to infection

through cuts and scratches, trees are rendered subject to infection by having their living bark torn. Notwithstanding this, many tree surgeons use pruning hooks and climbing spurs and cut fresh gashes in the tree. To break off small dead branches a workman may use a long pruning hook as though it were a club. In doing so the hook usually causes injury to the young bark nearby. Every new wound may furnish a new point of entrance for decay, even though the old dead branch may have been removed.

The use of climbing spurs should be particularly avoided on trees in vicinities where there is a contagious infection. They should simply render the treated tree all the more liable to catch the disease which is "in the air."

All properly equipped firms of commercial surgeons should have ladders that would reach forty or more feet into a tree. Ladders, ropes and rubber-soled shoes will allow a man to reach practically every part. Reliable estimates indicate that it takes somewhat longer (perhaps 25 per cent on an average) to do work on a tree when these are used instead of climbing spurs, and this is one reason why many firms who value remuneration more than reputation use the spurs.

The U. S. Department of Agriculture is suggesting a plan that may help put commercial tree surgery on a better basis. Owners are urged to have a definite written contract with the tree surgeons they employ, and the following is suggested as a model for such contract:

(1) No climbing spurs shall be used on any part of a tree.

(2) The shoes worn by the workmen shall have soft rubber bottoms.

(3) Ordinary commercial orange shellac shall be applied to cover the cut edges of sapwood and cambium (which is the

soft formative tissue from which the new wood and bark originate) within five minutes after the final trimming cut is made.

(4) All cut or shellacked surfaces shall be painted with commercial creosote, followed by thick coal tar.

(5) All diseased, rotten, discolored, water-soaked or insect-eaten wood shall be removed in cavity work and the cavity inspected by the owner or his agent before it is filled.

(6) Only a good grade of Portland cement and clean, sharp sand in no weaker mixture than one to three shall be used to fill cavities.

(7) The contractor shall repair free of expense any defects that may appear in the work within one year.

If the owner prefers to have a cavity filled with asphalt or other material instead of cement, the contract can be altered accordingly. If it is desirable to substitute some other preparation for shellac, this can be done. Similarly, under certain conditions, various other modifications may be made, although alterations in Nos. 1, 2, 5 and 7 should be made with caution. It may so happen that if all insect-eaten wood is removed, the tree may be dangerously weakened; under such conditions the diseased matter can be removed to solid wood and the cavity fumigated.

The department realizes that this science is comparatively new and that methods in the near future may be developed that will prove far superior to some now in common use. It therefore invites correspondence either from individuals or firms concerning new methods of treatment and is prepared to advise regarding any particular method so far as experimental results will permit. The co-operation of all who are interested is necessary for this work. All interested are urged to write for the new bulletin.

STREET TREE AND FORESTRY WORK IN CHICAGO

The Special Park Commission of Chicago, a body that controls a number of small parks and playgrounds not under the jurisdiction of the three larger park bodies that control the larger pleasure grounds, in conjunction with the City Forester's office, has issued some valuable pamphlets on street tree planting that have been instrumental in arousing sentiment for tree planting in this city.

Pamphlet No. 6, from which we show a number of interesting illustrations, is a compendium of valuable information about city trees for the layman.

It discusses and illustrates the destruction of tree life; how, when and what to trim; remedies applied to cuts; examples of injurious trimming; tree surgery; what, when and how to plant; nursery grown vs. forest grown trees; desirable form of young trees; how to buy trees; preparing the tree hole; planting, cultivation of soil; trees which are most desirable; the best trees for street planting; how to make a lawn in the parkway; insects, how to kill them, and many other practical matters that the city householder should know about trees.

In regard to tree surgery the Bulletin says:

"Tree surgery is a profession which has grown to considerable importance; in this way sick and diseased trees are being restored to health. Briefly, tree surgery consists in cutting out the rotted parts of the trees and filling the cavities thus made with some substance which will make the cavity water and air tight. Most of these cavities on city trees are the result of improper trimming. A stub is left where a branch has been amputated. This stub,

into which the living sap no longer flows, becomes saturated with moisture, rot spores become active—the stub soon rots off, leaving the beginning of a pocket or cavity which is gradually increased by the action of the rot spores and boring insects. Then the birds and squirrels begin to build their nests in these cavities and help to increase them until almost the entire center of the tree trunk has been destroyed. Unless this rotting is stopped the strongest and most magnificent tree will be destroyed.

"The proper way to proceed is to clean out the entire cavity, using a chisel or gouge to remove all the rotted wood. Then wash the interior of the cavity with a solution of copper-sulphate made by dissolving in a wooden vessel one-fourth of a pound of copper-sulphate in ten gallons of water. The solution can be sprayed into the cavity by means of a small hand pump. This so-

lution will kill all the remaining rot spore and the cavity is now ready to be filled with cement. The filling is made by using three parts of clean sharp sand to one part of cement. Fill cavity with this mortar and then bring the filling to a smooth water-tight finish, with a mortar made by using one part of sand to one part of cement. Where the cavity is large, iron rods are sometimes used to reinforce the cement. Where defects of this sort are remedied before they have spread to any considerable extent to cure is simple and certain, and gradually the annual growth of the tree will cover the filling and conceal the patch of cement beneath the new bark; but while many trees can be saved in this way, there are an equal number beyond redemption, and the best thing to do is to remove them and plant healthy young trees to take their place."

J. H. Prost, superintendent of the Special Park Commission and city forester, is in charge of the executive work of the commission, and recommends the following street trees for Chicago conditions:

Those thoroughly tried: American elm, Norway maple, honey locust, hackberry, Carolina poplar, hard maple, white ash, American linden, catalpa, ailanthus.

Those tried and found questionable: European sycamore, red oak, pin oak, ginkgo, American sycamore.

Trees which are best for sections where the soil and atmosphere are poor: Carolina poplars, ailanthus, catalpa, certinensis poplars.

Trees which should not be planted at all in the streets: Cottonwoods, willows, box elders.



REMOVING STONE FROM ROOTS AND TREES AND REFILLING WITH SOIL.



RENOURISHING TREES.

NEW ENGLAND CEMETERY MEN MEET

The regular annual meeting of the New England Cemetery Association, held at Boston October 26, was one of the best meetings in the history of the organization. The meeting was called to order at 3:15 o'clock, at the Quincy House, Boston, Mass., President Henry S. Adams in the chair. The records of the last meeting were read and approved, and communications read and placed on file.

The applications of James H. Chase, engineer for Forest Hills Cemetery; Charles A. Ludden, commissioner of Fairview Cemetery, and Jesse Bannister, superintendent of Fairview Cemetery, Chicopee, Mass., were received and were unanimously elected to become members of the association.

Under the head of new business, George W. Creesy made a motion to make E. A. Moulton, of Concord, N. H., honorary member. The motion was seconded by J. C. Scorgie and the vote was unanimous.

Superintendent James Warren, Jr., of Providence, R. I., gave his report of the national convention, which was listened to with much interest. Mrs. George W. Creesy, of Salem, read a paper on the "Return Trip from the Convention," of herself and husband, which was also listened to with much pleasure. Frank Waterman, the Boston undertaker, read a paper on "Co-Operation of Cemetery Superintendents and Undertakers." This paper was very interesting and brought out an interesting discussion, participated in by L. Ross, J. C. Scorgie, Edgar King, W. M. Carr, C. Ross and others. The paper was as follows:

Co-Operation of Cemetery and Undertaker.

When your president asked me to be present with you today and say something, I have an idea that he thought he was going to draw me out; that there were differences existing between the undertaker and the cemetery superintendent; and that I might explode something among you, because he said he wanted me to come and give it to you right from the shoulder; but such is not the case, for I do not think there is any one thing in particular that I could have to say in regard to the treatment received at the hands of the superintendents and assistants of the cemeteries of Greater Boston, as I have always enjoyed the best of fellowship with those of you that I have done business with. Of course, there have been differences, and I believe these differences lead up to better service, not only in my business, but to yours, and our service to the public, which in a sense is sentimental, but must at all times be respected.

Times when the undertaker or superintendent has found fault, or taken exceptions to something that has happened, have perhaps been when the undertaker thought he owned the cemetery, or that the cemetery superintendent was going to have his own way, but, however, this is all a part of what is at times bound to arise, and the differences existing have been easily adjusted when the matter is brought to the attention of one or the other.

I do not think it proper for me to find fault with what is being done in any particular cemetery, or in fact any cemetery, or what this or that one connected with the cemeteries are doing, but there are matters that interest us as undertaker and superintendent that can be talked over to benefit both.

I think it is a good idea to get together and exchange views on certain subjects that interest us both, and for better service to those that employ us in the care and burial of the dead; and as I have not taken any one particular subject, I will

mention some of the things that came to my mind. First, Entering the cemetery in winter: Every cemetery is possessed of plenty of cracked stone and gravel. It is well to see that the approaches to and the avenues inside, when icy, have plenty of material to make it safe for horses, as these horses come over the pavements through the city, and it is pretty hard to put them on ice where they can hardly stand, when with a little thought it could be made comfortable for both horses and driver and avoid accidents.

We reach the grave, and when everything is done the best, we have a wooden walk on which you have to walk in single file; in most cases it is only a short walk. Why not double the walks so gentleman and lady can walk side by side, and not have the man walk in the mud, and the lady on the planks? We reach the grave; now at this particular point, I do not think much can be said to improve the manner in which a burial is made, provided the people wish to stand what little expense there is attached to make a burial (if you can say so) beautiful. There is the platform, the tent, the evergreen, the lowering device; what more can we ask for, but in this connection there are two things that might be bettered; one is that if the men employed at an interment could only be instructed to go to the rear of the mourners, and not stand in front of them, or in sight during the burial service. The other matter is the employment at interments of men that cannot understand English, not because there is any objection to the man because he cannot understand English, but because of misunderstandings which have often come to my notice and which have placed all in an embarrassing position, things happening that are never forgotten by relatives and friends. It is not of course for me to say who is to be employed or not, but I believe there are plenty of good sized men that can understand what is wanted, and should be used at interment.

Chapel Funerals: Superintendents know that in most cases I use my own men and paraphernalia, but not always, depending on the case and kind of service required; it is not because I do not want to, but for the reason that I have what is required and use, my own material. The cemeteries in and about Boston are to be congratulated on their chapels, and the service they render to the public. Chapel funerals should not be set within two hours of each other unless sure of kind of service and time required by each.

Mistakes—I wish it was more customary for the office of the cemetery (where the undertaker does not or forgets) to call the undertaker by telephone the day of funeral, to understand if everything is correct, just to go over the arrangements to be sure. The auto coming into use now leaves a chance for mistake in time, as one cemetery order calls for the time of service at such a place, and figuring a horse-drawn funeral, where it might be an auto funeral, and reach the cemetery ahead of time, or as some cemetery orders call for time of arrival, it may be a mistake of the undertaker in not knowing at the time the order was given that it was to be an auto funeral, and reach the cemetery ahead of time, and especially in the winter when we have 10:30, 11:00 and 12 o'clock funerals, reaching the cemetery at noon when the men are at lunch. I think it is a time when we should know, and not suppose, and can help one another by asking a few questions to be sure.

Sale of Lots and Single Graves: Of course it is understood that if a lot is to be purchased, the people go and select it, pay for it and give location for the grave if one is to be used. Why should not the same apply to single graves, and the same interest taken to sell a single grave as a lot? A great many times a person starting out to buy one or two single graves finally purchases a small lot. My custom is to have people go and select the grave themselves if possible, as they see just where it is to be, and can find no fault, and then and there decide the name of the person the certificate is to be made out to, and if paid for at the time, the certificate mailed direct to the purchaser, and not the undertaker; but if the undertaker is responsible for the payment, then the deed should be mailed to the undertaker. If the grave is ordered by undertaker, I do not think there should be any haste in making certificate out for the grave, for after a funeral is over and the bill is to be paid, this or that one says he or she will pay the bill if they can have the certificate of the grave in their name, and if it is already made out and not satisfactory, there is a fight on, and the undertaker through no fault of

his is kept waiting for his money, so I think there is no harm in letting these things rest until settled.

Plans of Lots: I believe plans of lots should be issued with each deed, as in a great many cases, they are, but it should be designated on plan or deed what the area of lot will accommodate as to earth, brick, cement, or slate graves for adults. A 300 ft. lot, 12 earth, 12 cement, 10 brick, and so on.

There are two subjects that no doubt at the present time come to the mind of the undertaker and cemetery superintendent, and a question as to how they may be best taken care of. These two subjects come perhaps more to the undertaker than the cemetery superintendent, for the undertaker is interested in both, and the superintendent, while interested in both, one does not concern the superintendent as much as the undertaker. These are the cement vault, how best to have it become used, or not used, and cemetery charges, how best to be taken care of. They interest the undertaker the most because if he furnishes a cement vault, he does it at a profit, and if he pays interment fees, and price of single grave, he does it at a loss. The undertaker has or is supposed to have everything on sale pertaining to the burial of the dead, and the steel and cement vaults are the latest additions to the stock supposed to be carried and on sale. There are certain kinds of receptacles for the burial of the dead that there is more profit in than others. At the same time there are those that we have to actually handle. The cement vault, we do not handle, but receive a profit on the sale, so I suppose as far as the cement vault is concerned, I should talk of its use from the standpoint of the undertaker.

Before their manufacture, the brick or slate grave was used (outside of the earth grave) and furnished by the cemetery. You can not blame the undertaker for wanting to handle the cement vault just as he does a pine, oak, chestnut, mahogany box or steel vault, for the time when the cement vault was first introduced, the manufacturers of cement vaults were sent to the undertakers by the cemetery superintendents, as all the cemetery did was to build brick graves the required size, as they would stand better than any cement vault, and so to commence with the cement vault, was first thrown down by the cemeteries which has led the matter where it is today; and as long as the outside manufacturer will make and deliver, I do not see why it is not up to the cemetery to put the cement vault in that is delivered to the cemetery for use, and seal it up after body is placed in it, as much as it is to receive any kind of an outside box and do as always has been done. In my opinion, there would be just as much sense in the cemeteries making boxes as it would be to manufacture cement vaults. The box making proposition was at one time introduced by Mr. Safford, the first superintendent of Cedar Grove Cemetery, to relieve the undertaker from delivering boxes, but after a few mistakes, it was given up, so I believe that making cement vaults by the cemeteries would not be a paying proposition.

If the cement vault comes into general use they will be furnished through the undertaker and delivered by the manufacturer, and placed in the ground and sealed up by the cemetery people, charging as to the service rendered. If these vaults come into use there will be as many kinds and prices as there are outside boxes, and will be bought accordingly.

The undertaker of today is not going to see these sales slip through his fingers and is going to sell anything people want. A cement vault can be made, and is made so that for an ordinary size or for an extra size, the width will not exceed 2 x 6, making room in a 300 ft. lot for 12 burials, where if brick were used for even an ordinary size, there would be only room for 11.

Of course, some people have an idea that as long as one or more bodies have been placed in brick graves in a lot why we will have the same; but there are quite a few people that want cement. There are not a great many used at present, but the use will increase, as these manufacturers are bound to advertise and put them before the public, so that they can be handled by the one having the funeral arrangements in charge.

There are those who would not use a cement vault or even a brick grave, and sometimes not even an outside box; but to those that want everything done the best, the cement vault or box is

going to appeal to people more and more, for just the idea cement is to many everlasting, perpetual and it may be, and may not be, but it is the sentiment that goes with the burial of the dead.

If we use a cement vault, we lose the sale of an outside box, and the cemetery the sale of a brick grave, and so arises the question of how best to meet this proposition. If the people go to the cemetery and make their own arrangements, the profit belongs to the cemetery, if the people arrange with the undertaker, it belongs to him. If the cemetery makes a cement vault and arrangement is made through the undertaker, and he purchases the cement vault of the cemetery, why could not the cemetery sell it to the undertaker, if not, it will eventually come through the undertaker from the manufacturer.

There are few perhaps that realize what cemetery charges mean to an undertaker, and how did it first come about that the undertaker took care of such charges. I can go back to the time when I dug graves and opened underground tombs myself. There was the old Eustis Street Ground, Warren Street Ground, West Roxbury, and South Ground, opposite Rutland Street, we made the charge for the opening and when a grave was to be opened in the other cemeteries, we had it done, but the people supposed we had our own men do it, as some people to this very day think the undertaker buys up a section of a cemetery to sell at a profit, and hires the men to do the work; and so it has been that the undertaker has taken care of the cemetery charges. Years ago it did not amount to a great deal as the maximum charge was \$3 or \$5, and a new grave \$5-\$8-\$10 or \$12, but it has grown to such an extent that it seems as if there was to be no end to it. It is hard for people to understand that the undertaker does not get a commission and I have had it put to me pretty direct and asked how much commission we were allowed by the cemeteries, for it is strange to some business men to think that when one takes the responsibility to pay such charges as we do, there is nothing in it, and in the course of a year it is a loss. For people I know, I am willing to pay the cemetery charges, and had rather so as to relieve them, for I know they appreciate it.

When a person will not believe you that a single grave in a cemetery costs \$45.00, and interment \$6.00, and goes to the cemetery himself so that if there is any commission you will not get it, it makes you feel sometimes that you wish everyone would go to the cemeteries, give their order, and pay the bills. I think the cemetery people get out of it easy by having the undertaker pay the charges. I am willing to pay interment charge, but on single graves the price has advanced so that I think the cemetery should wait until we receive our money, provided the dealing is with a reputable concern. The cemetery charges with my concern amount to a great deal during a year, but we have the satisfaction of taking care of everything connected with a funeral, and on the whole, believe that people are better satisfied to have all these things taken care of relieving them of going to the cemetery or being bothered with the details connected with a funeral. It has grown from the undertaker digging the grave himself to now it has become a part of his business to carry out every detail; and to see these charges are taken care of just as much as you would think it strange if you came to this hotel to order a dinner and have the hotel keeper tell you that he will furnish the dinner, but you must get your own waiters and pay them yourself.

I think that when people go to the cemetery to buy a grave, they should be asked to pay for the grave, interment, and sign an order, and if a lot is bought, the cemetery should, when the slip is made out for the price of the lot, the interment fee, should be added and not made a separate charge for the undertaker to pay unless there has been an understanding with the undertaker in regard to the charges.

I do not find much fault in a way about paying cemetery charges as a general thing, sometimes it is a loss, but there is satisfaction to me when I take charge of a burial to see every detail taken care of, and relieve those of trouble, for in most cases it is appreciated by those for whom it is done.

As a child, a youth, a young man (and that is as far as I have got) for over 45 years it has been my life work to go in and out of the cemeteries of greater Boston, and there are a few who can note the changes more than I. The grave with the pile of dirt and rocks, men with rubber boots and overalls, ropes to lower bodies, to the present

screened earth and loam, evergreen bough, brick and cement gaves, lowering device, tent, men in proper dress, and the unfulfilling desire of you superintendents to make interments beautiful (if it may be termed) as possible, not to mention the little runabouts you have to speed over your smooth avenues. It is pleasant for me to be here and meet those I know personally, and also those I know by name only, and hope that the superintendents will find it possible for the undertaker to see him more and especially at interments and become better acquainted.

To the many people I have been to these cemeteries with, it has been a sad time. To me it has been a pleasure to have met and had the acquaintance of the superintendents at the present time and those that have gone beyond, but to me not forgotten.

Leonard W. Ross also read a paper, "Is It Best That Part of Our Work Be Done by Other Than Our Own Employees?" This paper was called for by some of our superintendents and touched many subjects that were of interest to them and led to much discussion from Messrs. Scorgie, Warren, Peterson and Davis. Mr. Davis was especially pleased with the paper, as he said it hit his case and he got many points from it. John F. Peterson read a paper entitled "Motor Trucks Applied to Cemetery Work." This paper also brought

out much discussion, Charles W. Ross saying that "on short hauls the horse could do more work than a truck." Many of the members did not agree with him. Mr. Ross did think on long runs of three miles the truck could do more work than the horse. This paper was thrashed out by many of the members and many good points were learned from same, of much interest to all. H. W. Ross moved that the papers and report of the meeting be printed in pamphlet form and sent to each member. Seconded by Mr. Creesy. The motion was carried and the president and secretary were made a committee for same. It was later, however, decided to have them printed in PARK AND CEMETERY instead.

Forty-one members and friends were present.

At the close of the meeting the members and friends adjourned to the banquet room for the usual dinner. Thirty in number were present. After dinner some eighteen of the party attended the Cort Theater.

Everett, Mass.

HORACE A. DERRY,
Secretary.

PARK NEWS.

The forty-fifth annual report of the Buffalo Park Commissioners sets forth some very interesting facts on the improvements made in the past year. Among the most noted are the construction of the locker house in Delaware Park, the improving of Lafayette Square, and the partial completion of the construction of that portion of the Niagara Falls boulevard which is under the jurisdiction of the Park Department.

The annual meeting of the Grand Rapids Park and Boulevard Association was held a short time ago at Grace parish house. The reports show that Reed's Lake boulevard has been completed to Manhattan, that two miles have been graded on the south side of the lake and that the channel banks on both sides of the lake have been leveled.

Ninety acres of ground were added to Cincinnati's park system recently when the Caldwell tract in Carthage was donated to the city through the Board of Park Commissioners, by Mr. J. Nelson Caldwell. The tract was originally part of the Miami purchase in 1790.

Hare & Hare, landscape architects, of Kansas City, Mo., have had the park work of Kansas City, Kan., for three years, and during that time furnished a city plan for that portion north of Muncie road, and also prepared complete working plans, details and planting plans for individual parks. In fact, they have made a complete replat

of the city, showing the work accomplished and giving their advice as to the development in the future. Much of the work was started and considerable of it accomplished in the land already acquired during H. E. Dean's tenure of office as commissioner of parks. Since he left the office little has been done toward carrying out the plans. However, the work accomplished started things in the right way for Kansas City. They are now making plans and detail plans for developing park land now owned by the city of Springfield, Mo. This work was started early in the year and the work so far accomplished has been to prepare plans for four parks now owned. Owing to a small park fund, it is necessary that their work be continued for a long period of time, doing only the amount of work that they order. The Woolen Mill Park includes ten acres, half of which they have made into a lake for bathing and boating. This is fed by one spring which flows a stream one foot in diameter. The day it was opened 10,000 people visited the park and several thousand went in swimming.

New Parks and Improvements.

Work has been commenced on Union Station Park, the proposed park around the Santa Fe depot at Galveston, Tex. This will be one of the most elaborate parks on the Santa Fe line, and the Santa Fe emblem, the circle and the cross, will be car-

ried out by means of several varieties of flowers.

The city of San Antonio, Tex., is trying to obtain the title to the strip of land lying along River avenue for the extension of Brackenridge Park.

The United States Senate recently adopted the bill creating the great Colorado park and it will now be put before the House for passage. The tract for the proposed park embraces more than 300,000 acres in the beautiful Estes Park and Long's Peak region, Denver, Colo.

The Turtle Creek Park property was recently secured by the Park Board of Dallas, Tex. The total acreage of 122 acres cost the city \$40,000, 100 acres of which were donated by Colonel W. E. Hughes. The board is also considering the purchase of the entire Lake Cliff property for a new park at a cost of \$55,000 cash. Members of the Park Board recently inspected a site for a proposed negro park located near Hall street. The Park Board recently authorized the issuance of a city warrant for \$30,000 to the Board of Trustees of St. Mary's College, in payment of five and a half acres of property adjoining the St. Mary's College campus.

The city of Bloomington, Ill., recently held a park improvement day. The citizens donated their services and the two parks were much improved as a result.

The Park Commissioners of Macon, Ga., recently visited the parks of this city with a view to determine what improvements could be made to make the parks more attractive.

To help solve the problem of the unemployed in Youngstown, Ohio, Mayor Hartenstein has urged the council to pass special bond issues for park improvements.

Plans for south side boulevard improvement work in Indianapolis, Ind., to be undertaken in the South Park district next year, were discussed informally at a meeting of the Board of Park Commissioners a short time ago. No action was taken beyond instructing J. H. Lowry, executive officer, to have an estimate made of the cost of various proposed sections along both sides of Pleasant run, east of Shelby street.

The City Park and Public Square at Medina, O., are being improved under the direction of Messrs. Clark & Pike, landscape architects, Willoughby, O. The work includes improvements to the grounds of the Public Library and the Congregational Church, which abut upon the Public Square.

The Park Board budget for Racine, Wis., has been so cut down that many of the improvements that were to be made will have to be eliminated. Outside of paying the salaries, the board will only be able to pay the first installments and interest on the Bauman property.

The Stewart Engineering Corporation, of New York, has been awarded the gen-

eral contract for the Perry memorial monument terrace and parking grounds, covering fourteen acres, at Put-in-Bay, O., which is the final development for the project to commemorate the victory of Commodore Oliver Hazard Perry at the battle of Lake Erie, for which an appropriation of \$800,000 has been made by the United States government. J. H. Friedlander and C. D. Seymour are the associate architects.

To provide work for Youngstown's (O.) unemployed this winter the council recently voted to issue bonds in the sum of \$15,000, on recommendation of the parks committee. This money will be distributed among all of the city parks and will do much to relieve the stress in the city among the poor this winter.

Members of the City Planning Commission, of Scranton, Pa., discussed at a recent meeting the possibility of a \$300,000 bond issue, the money to be used for a park extension movement.

Joseph M. Hixon, of La Crosse, Wis., recently agreed to complete Levee Park of that city, providing the Finance Committee of the City Council would appropriate \$15,000 instead of \$10,000 for park improvements. The completion includes the sodding of the ground, laying out of the roads and walks and the planting of trees and flowers.

The grounds of the State Normal School at Maryville, Mo., are being beautified along

lines suggested by Horace F. Major, of Columbia, Mo., professor of landscape gardening and superintendent of grounds at the University of Missouri.

During the winter months Grand Rapids will spend approximately \$40,000 on its park system, according to plans prepared by Eugene Goebel, superintendent of parks.

A new city park is being created as a result of the activity of the children attending the Moneta (Cal.) school. The Moneta parent-teacher organization has decided to make the two and one-half acres of school ground into a park. A handball court, ball ground, tennis court and other accessories of the playground are to be features.

The work of planting shrubbery in the new park at Union Station, in the rear of the general office building of the Gulf, Colorado & Santa Fe at Galveston, Tex., has been commenced under the supervision of Mr. Dornberger, of Brenham, gardener for the Santa Fe Railway.

Plans for the building to be erected at Trinity Play Park, Dallas, Tex., have been submitted by Architects Lang & Wichell. The building will cost \$18,000 and will contain quarters for the free kindergarten, milk station, rest rooms, toilets, locker rooms and reading rooms. Preliminary work will soon be commenced for the developing of the Colc tract. Plans for Exall Park and Turner Plaza have also been gone over in detail.

CEMETERY NOTES

The new office building at Mt. Elliot Cemetery, Detroit, Mich., now nearing completion, is attractive in design and modern in its appointments. The style is an adaptation of English gothic. The exterior is Kelly's Island gray limestone, random ashlar, with a roof of Bangor gray slate, rustic finish, graduated from one-quarter to three-quarters of an inch thick, laid in random widths. The building is 88 feet 8 inches by 33 feet 4 inches, exclusive of a covered driveway across one end, which gives it a total length of 107 feet. On the first floor are the waiting room, general office, two private offices, private toilets and a roomy vault for records. The waiting room has a vaulted ceiling and a floor of terazzo; the walls are finished in gray plaster, with oak trim around doors and windows. This room has a brick mantel with tile inlay and cut stone shelf. It is well lighted and will be comfortably furnished. On the second floor there are conveniently arranged apartments for the keeper. The building is electrically lighted and steam heated. A high basement provides ample storage room for tools and supplies, a

boiler room, fuel room, vault for records, etc. Conveniently arranged toilet rooms are located in a one-story wing, 36 feet by 26 feet 8 inches. The rooms have marble wainscoting and white enamel brick above and terazzo floors. This part of the building has a copper roof and special provision has been made for ventilating the rooms. Donaldson & Meier, of Detroit, were the architects. The estimated cost of the building and equipment is about \$33,000. When Superintendent John Reid's planting plans have been carried out, the building, which is situated convenient to the main entrance, still not in full view, will have an artistic setting amidst tastefully grouped masses of trees and shrubs.

The annual report of the Rhinebeck Cemetery, Rhinebeck, N. Y., sets for the following statistics: Disbursements—Deposited in Rhinebeck Savings Bank, trust fund, \$1,250; total, \$4,603.44. Resources—Perpetual care fund, \$19,031.20; cemetery fund invested, \$9,627; total, \$30,195.81. Interments for the year, 67.

The annual meeting of the Fairview Cemetery Association, of Stillwater, Wis.,

was recently held in the rooms of the Booster Club. The report of the accountant showed the books to be in excellent shape. The following officers were elected for the ensuing year: Charles E. Mosier, president; A. G. Schuttinger, vice-president; Thomas H. Warren, secretary-treasurer; E. W. Reinhardt, superintendent.

Trustees of the Prospect Hill Cemetery, Omaha, Neb., have asked the District Court to set aside an injunction granted many years ago, preventing the association from using for burial purposes a strip of land 200 feet wide adjoining the cemetery.

At the annual election of officers for the Town of Maine (Ill.) Cemetery Association the following officers were re-elected: Charles Duwel, president; D. A. Leeds, of Park Ridge, and Messrs. Curtis and Wheeler of Des Plaines, trustees; Fred C. Stagg, secretary; F. I. Gillick was reappointed treasurer.

The Lake View Cemetery Association's 200 acres of unused land in East Cleveland, Cleveland Heights and Cleveland probably will be placed on the tax duplicate soon for \$600,000, according to County Tax Commissioner Packler. This action will be the result of a ruling received from Attorney-General Hogan.

The recently completed report of Secretary Clarence Cox, of the Oakwood Cemetery Association, Fremont, Ill., shows the organization in a most flourishing financial condition, with \$25,000 or more in the standing endowment fund.

Officers were elected at the biennial meeting of the Savannah Cemetery Association, of El Monte, Cal., recently, as follows: Treasurer, John Guess; Board of Trustees, J. M. Schaml, Mrs. Thos. Freer and Mrs. Mary Blackley. A supper is always given at every meeting, the proceeds of which are added to the fund.

The "Perpetual Care and Improvement Fund," for the care of lots and graves in Bluff City Cemetery, Elgin, Ill., has been decided upon. The first official act was the investing of \$500 in city improvement bonds, the interest to be used for the care of lots and graves of deceased persons who left money for that purpose.

A petition signed by a great number of residents of Elmhurst, Ill., was presented to the City Council asking for the condemnation and removal of the two small cemeteries in the western part of the city, the German St. Peter's Church Cemetery and the Catholic St. Mary's Cemetery, contending that the presence of these cemeteries was detrimental to the growth of the city and injurious to the health of the neighboring residents.

At a meeting of the Mound Cemetery Association at Springfield, Ill., recently, the following new officers were elected: President, Mrs. Delos Travis; vice-president,

Miss Louise Clark; secretary, Mrs. John Longsdorf; treasurer, Mrs. Louis Roley.

At a meeting of the stockholders of Oakland Cemetery Association, Freeport, Ill., William Koenig and Joseph Emmert were elected for three years. At the directors' meeting all of the old officers were re-elected.

A new fence with iron posts and woven wire mesh has been built around the Catholic Cemetery, northeast of Chenoa, Ill. This is a much needed improvement and greatly beautifies the grounds. The name of the cemetery has been changed to Calvary Cemetery and adorns the gateway to the grounds.

The Barnett Cemetery Association was recently incorporated at Kokomo, Ind. Directors are: E. H. Bonnell, L. C. Miller and George Henry.

The Finance Committee of the Alton Cemetery Association, Alton, Ill., which is soliciting funds both for the immediate improvement of the cemetery, and also a perpetual fund, report that they have collected \$1,155 toward the immediate improvement fund and \$3,585 toward the perpetual fund. The association is now in debt to the extent of \$1,000.

The Glendale Cemetery Co., of Cincinnati, O., was named defendant in involuntary bankruptcy proceedings instituted in the United States District Court recently by the Indiana State Bank, of Indianapolis, and the East Tenth Street Bank, of Indianapolis, holders of bonds of the company. The cemetery company was formed by Charles Heinig back in 1909 for the purpose of buying and selling real estate. He withdrew from the company some years ago. It is understood that the company had charge of the sale of lots in the cemetery. Judson Pratt is president and C. M. Skillman is secretary of the company.

The members of the Woodland Cemetery Association, of McHenry, Ill., met recently and the following officers were elected for the ensuing year: Mrs. E. S. Wheeler, president; Mrs. T. J. Walsh, treasurer; trustees, Mrs. C. C. Colby, Mrs. James B. Perry, F. L. McOmber, John F. Claxton.

C. Schubert, superintendent of Alma City Cemetery, Alma City, Kan., was recently complimented in the local press on the fine work he has done in making this cemetery one of the beauty spots of the city.

At the meeting of the Wapella Long Point Cemetery Association, held at Long Point, Ill., recently, the following officers were elected: Frank H. Roberts, president; Robert Summers, vice-president; Abram Summers, secretary; A. D. Metz, treasurer. Trustees for two years, E. M. Bell, E. Norvell and C. E. Swearingen.

The revised cemetery ordinance regulating the construction of monument foundations in Oakland Cemetery, Princeton, Ill., has been adopted by the council. The principal change in the ordinance provides

for a minimum charge of one dollar for inspection by the cemetery superintendent and that all unused materials and refuse, after the construction of a monument foundation, must be removed in accordance with the directions of the superintendent.

The Roscoe Cemetery Association, of St. Clair, Mo., held a meeting a short time ago at the Burch Hotel, and the following officers were elected: John S. Pence, president; Walter Garver, vice-president; Mrs. T. A. Baker, treasurer; Arta Moore, secretary.

Oakwood Cemetery Association, of Austin, Tex., held the first meeting of the fall in the early part of October. The following officers were elected: Mrs. Mary H. Mitchell, president; Mrs. Edwin Bowen, vice-president; Mrs. J. K. Dounan, treasurer; Miss Kate Barnhart, secretary; Mrs. E. P. Jordon, corresponding secretary. Oakwood Cemetery is conducted under municipal management and Mayor A. P. Wooldridge and the commissioners have made many improvements since coming into office. Among the most noted is the mortuary chapel now nearing completion. This is a purely Gothic structure of white stone with rich brown trimmings and stands in a beautiful grove.

A beautiful memorial has been erected to George W. Liniger on the family lot in Forest Lawn Cemetery, Omaha, Neb. In size, character and proportion it is an exact reproduction of the Cornelius Lucius Scipio sarcophagus, preserved in the Vatican Museum at Rome as one of the ancient masterpieces of mortuary art. It was cut in light gray Vermont granite and was erected by the Harrison Granite Co., of Chicago, and is the finest monument in this vicinity. Size at the bottom is 14 feet by 9 feet 6 inches, stands 6 feet 6 inches high and weighs 27 tons. Two other handsome mausoleums are also being erected in this cemetery, one by Joseph Pajean & Son, of Chicago, for George A. Joslyn, and the other by J. F. Bloom & Co., Omaha, for E. M. F. Leflang. Other beautiful mausoleums are the Joseph Cullen Root, the Charles N. Dietz and the Guy C. Barton structures.

St. Clair Cemetery, of Greensburg, Pa., recently issued a book on the history of this fine cemetery. It is illustrated by several of the most noted mausoleums and other monuments erected on its grounds and shows what progress this cemetery has made toward beautifying and improving its land into one of the finest cemeteries in the country.

The annual report of Joseph C. Spear, secretary of Spring Grove Cemetery, of Cincinnati, Ohio, sets forth the following statistics. Number of lots sold during the year, 89; fractions, 20; area, 38; 623 square feet; number of vault permits issued, 23; number of interments to date, 85,238; number of lot holders, 12,257. Disburse-

ments: Operation and maintenance, \$49,695.31; salaries, \$18,715.70; for labor on trust fund lots and graves, \$11,130. Receipts: From sale of lots, \$39,628.50; interments, \$31,937.20; myrtle and special care account, \$28,285.50; total receipts from sale of lots, \$101,401.20; receipts from ground rents, \$30,833.98; total receipts, \$166,163.98; total receipts with balance, \$171,947.97. Directors for the ensuing year were elected as follows: For three-year terms, Edward Goepper, J. V. B. Scarborough and Frank J. Jones; for two years, Arthur Espy.

New Cemeteries and Improvements.

The four-acre woodland addition to Oakdale Cemetery, Asheville, N. C., has been cleared and sown and the ground will soon be laid out into lots for sale.

The Butler Center Cemetery Association was recently incorporated at Butler, N. Y. The directors are Warren Henderson, Abel Wing and George Vincent, all of Butler. The company proposes to buy additional land for cemetery purposes.

The "Washelli" (Indian word signifying place of rest) Cemetery, of Seattle, Wash., is now ready for interments. The grounds are being developed by the Necropolis Company at a reported cost of \$250,000.

Reconstruction of the chapel of the Mount Scott Park Cemetery, Portland, Ore., recently damaged by fire, will be commenced soon. The building is to be used for a crematorium, office and chapel.

An association was recently organized at Esgate, Ia., to care for and improve Esgate Cemetery.

An appropriation of \$250 has been made for the purpose of improving the Confederate Cemetery at Johnson's Island, Ohio.

The Long's Run Cemetery Association was recently incorporated at East Liverpool, Ohio, by John P. Montgomery and others.

A new addition is being surveyed for Hickory Grove Cemetery, Laurel, Miss.

Devore Cemetery was recently incorporated at Delevan, Ill. The incorporators are: Joseph Devore, Mrs. Ella Berchtold, John Canopy, Hiram Oldham, Mrs. Annie Devore, Mrs. Mary Vandyke, Mrs. Emma Bertram and F. E. Canopy.

Application for a charter for the Chester View Cemetery Co. was made to the Dauphin County Court at Harrisburg, Pa., a short time ago. The capital is fixed at \$50,000 and the incorporators are W. Dale Sheaffer, E. M. Klucker, Lewis O'Donnell, C. W. Hyde and H. D. Gardner.

The Oakland Cemetery Association, of St. Paul, Minn., has asked this city to appropriate the land surrounding the cemetery, to be improved and beautified into an addition to the cemetery.

The Mound Grove Cemetery Association, of Kankakee, Ill., has recently cleaned up and improved the part of the

grounds known as Potters Field, and this part of the cemetery will receive perpetual care in the future.

The beautiful new wrought iron fence around Greenwood Cemetery, Salena, Ill., has been completed. The construction of the fence, which is 1,752 feet long and cost \$2,919.17, was under the entire charge of the Woman's Auxiliary Association.

Pleasant View Cemetery, of Kewanee, Ill., has been greatly improved in appearance as a result of the work this season. About the most notable improvement is the paving of all the roads.

About twelve receiving vaults have been completed in Parklawn Cemetery, Waco, Tex., and work will soon be commenced on the new chapel. The grounds are being improved under the system of landscape gardening.

The city administration of Joplin, Mo., has greatly improved Fairview Cemetery by grading the roadways, painting the fence and the planting of flower beds.

The work of laying out new lots in the south addition to Pleasant View Cemetery, Kewanee, Ill., was recently commenced by City Engineer Harry Stokes. The new section comprises more ground than the older part of the cemetery.

Directors of the Oakdale Cemetery Association, Davenport, Ia., recently opened the last unsold portion of the cemetery, the improvement of which has just been completed at a cost of \$7,000. The new tract is fifteen acres in area and lies at and to the east of the main entrance to the cemetery.

The W. F. Shaffer Realty Co., of Wheeling, W. Va., has secured an option on the Hugh Clark estate, adjoining Greenwood Cemetery, and are organizing a company of local outside parties to improve and open a modern cemetery.

The new lodge built by the Woodland Cemetery Association, of Quincy, Ill., at the entrance to the cemetery is nearly completed. The new building, coated with stucco, is two stories and certainly a handsome improvement, a credit to the association and an ornament to Woodland Cemetery.

Extensive plans for beautifying the City Cemetery, of Nashville, Tenn., have been made by Superintendent Charles A. Marlin.

The work of cleaning up the Maberry Cemetery, of Carrollton, Ill., has recently been undertaken by an association organized by the ladies of that neighborhood.

The Chester View Cemetery Association was recently granted a charter of incorporation by the court at Harrisburg, Pa.

The Crown Hill Cemetery Association was recently incorporated at Prospect, Pa. The officers are A. P. Starr, J. B. Dick and J. E. Forsythe.

St. Adelbert's Cemetery property, of St. Adelbert's Parish, East St. Louis, Ill., was recently dedicated with impressive cere-

monies in which the Rev. Henry Althoff, D. D., bishop of Belleville, participated.

To improve the neglected cemetery located on the Geneva road, the citizens of Pleasant Prairie, Wis., recently organized the Vale Cemetery Association. The trustees named were George McNeil, Albert Barter and Mrs. Frederick Barter.

Oakland Cemetery, of Danville, Ill., has been greatly improved by the erection of an ornamental iron fence upon a stone base around the grounds.

Work has been commenced by Contractor C. B. Milligan on the new rest house at Hillside Cemetery, Marshfield, Wis.

The rest house at Mound Cemetery, Racine, Wis., for which \$3,000 was appropriated, is rapidly nearing completion and will soon be ready.

Berea Cemetery Co. has been incorporated at Berea, Ky., by T. P. Osborne, J. W. Stephens and W. F. Kidd.

A receiving vault which is to be built at Eveleth Cemetery, Virginia, Minn., will add toward beautifying the grounds of this cemetery.

The cost of recent improvements made at Holy Cross Cemetery, Lincoln, Ill., has been entirely subscribed for by the members of St. Patrick's Church. The improvement consists of a new iron fence with large brick pillars and new gravel roads.

Alderman John W. Daniels, chairman of the Committee on Public Grounds and Buildings, has been instrumental in installing a new set of records for the City Cemetery, of Freeport, Ill.

Oakwood Cemetery Association, of Waco, Tex., is agitating the erection of a new entrance gate.

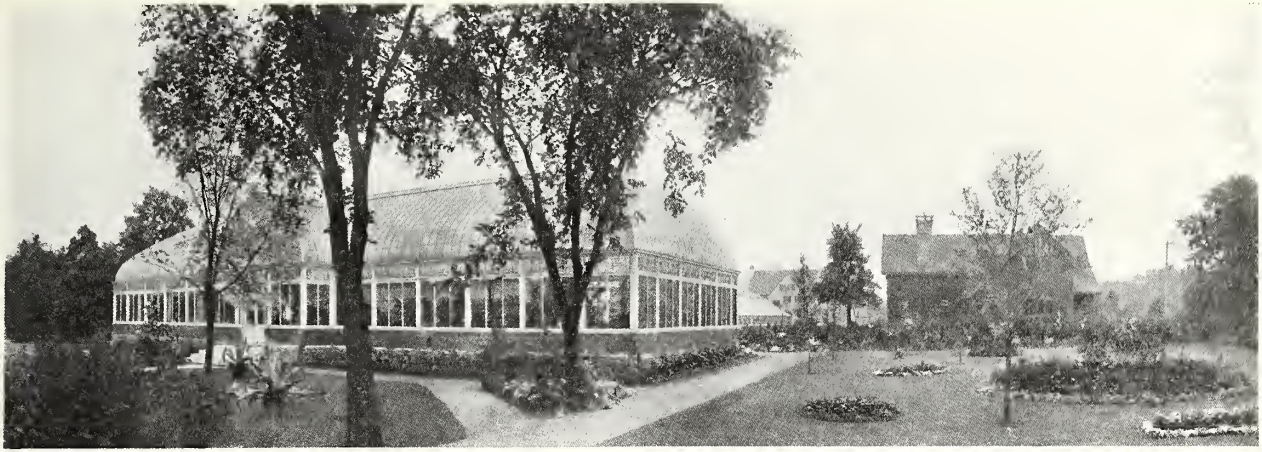
Members of the State Line Cemetery Association, Texarkana, Ark., are soliciting funds to be used to employ a sexton to care for and improve the entire cemetery.

A resolution was adopted by the Commission Council recently authorizing the purchase of 60.9 acres of land from H. C. Rogers, of Oshkosh, Wis., for the purpose of increasing the size of Riverside Cemetery at a cost of \$300 an acre.

Through the terms of an agreement reached a short time ago between Bishop Keiley and officers of the Lawton Terrace Co., of Savannah, Ga., the Catholic Cemetery of that city has been increased 2.17 acres.

Members of the fourth degree, Knights of Columbus, Waco, Tex., at a recent meeting organized an association to look after the improvement of Holy Cross Cemetery.

John T. Fletcher and his associates have purchased the old Springer place east of Columbus, Ga., better known as the Foley Greenhouse place, and are considering turning it into a private cemetery. The tract of land contains about forty-five acres of ground, well drained and shaded.



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OBITUARY.

Elizabeth Lupton Bradbury, wife of W. K. Bradbury, superintendent and treasurer of Earlham Cemetery, Richmond, Ind., recently died in that city. Both Mr. and Mrs. Bradbury were frequent attendants at the conventions of the Association of American Cemetery Superintendents.

TRADE PUBLICATIONS.

The Waterloo Cement Machinery Corporation, of Waterloo, Ia., has recently issued a profusely illustrated 40-page catalog of Wonder Mixers which treats the mixer proposition from a new standpoint. It is designed to visualize the thoroughness of the construction and drive home the "reason why" in a way that is very satisfactory to "the man from Missouri." The book is devoted to the Little Wonder "Five" and the Wonder "Ten"; the auxiliary light and heavy duty Hoisting Equipment for both mixers; the Rotary Pump, Automatic Water-Measuring Tank and the Gasoline Engine. Construction scenes showing the wide range of utility of the machines are an interesting feature. A copy will be sent free to anyone interested.

The forty-sixth annual catalog of the Philadelphia Lawn Mower Co., just issued, is much improved over previous issues in both typography and matter. It has many new illustrations throughout and shows to good advantage this company's many styles of hand and horse mowers adapted to any use in park and cemetery work.

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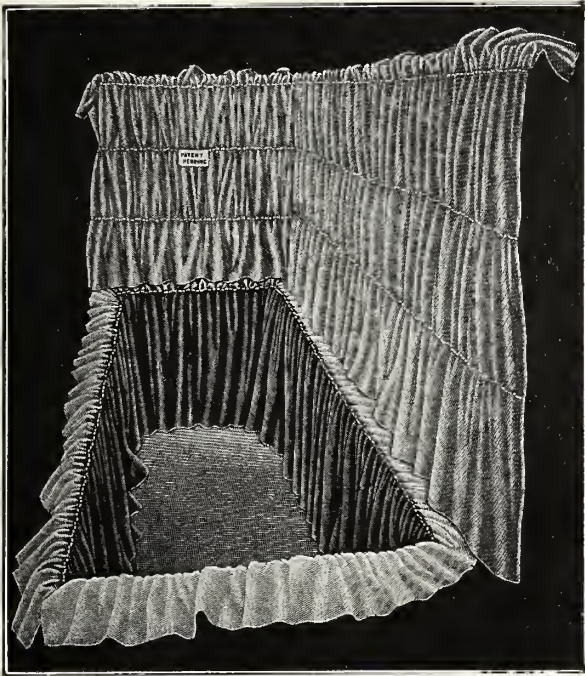
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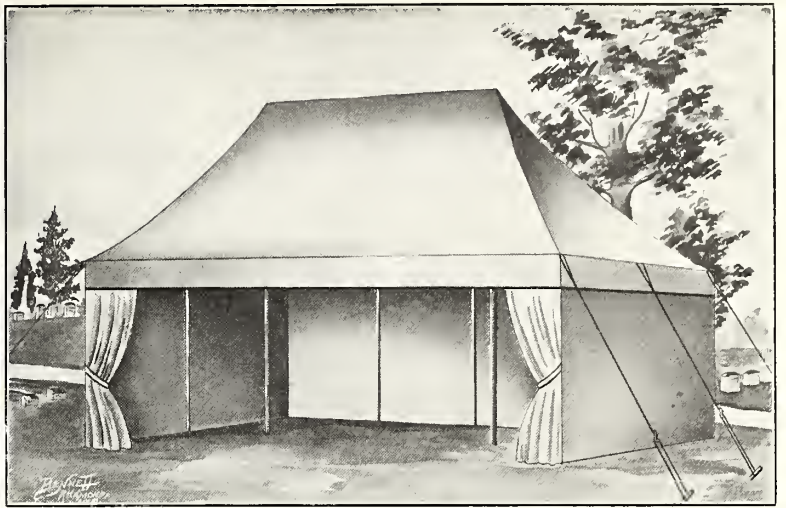
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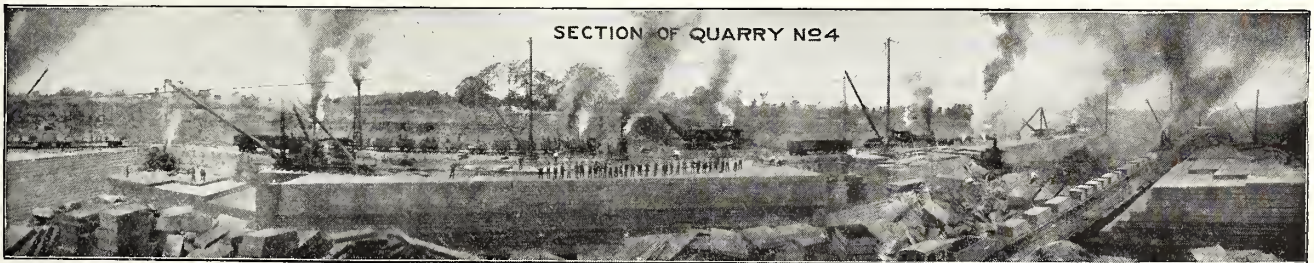


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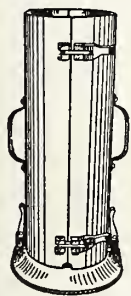
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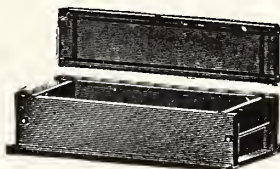
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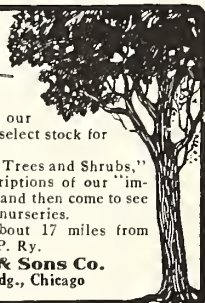
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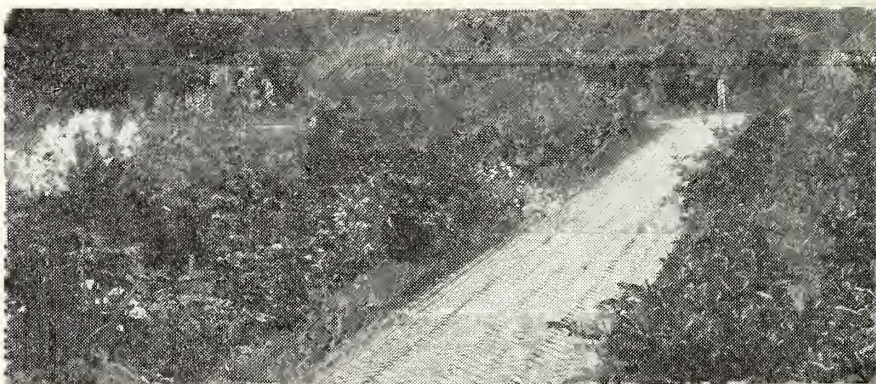


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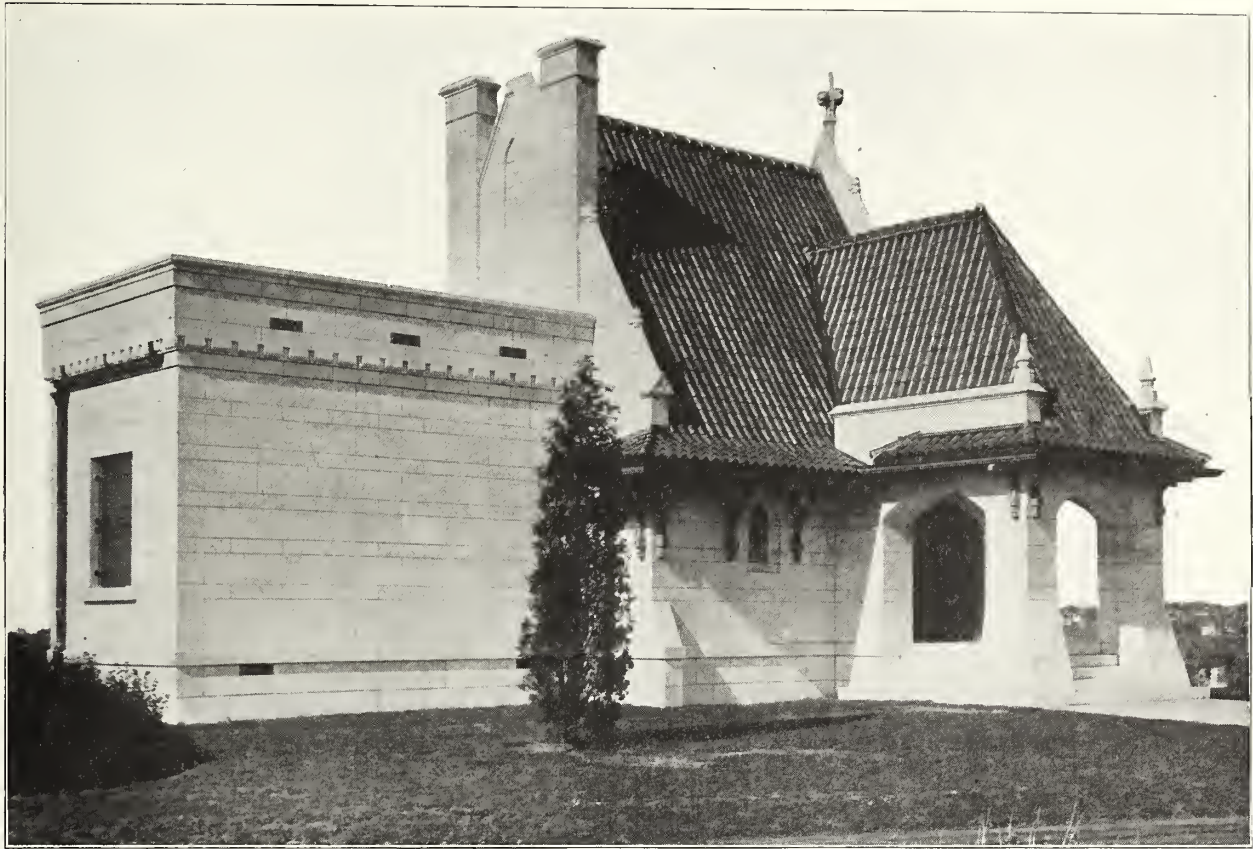
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C. J. Field, Esq.,
Chicago Representative,
Colorado-Yule Marble Co.

Sioux City, Ia., Oct. 26, 1914.

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I take pleasure in replying to your letter of October 21st, in reference to the Chapel that you persuaded me to build in Graceland Park Cemetery. The growth of Graceland has been phenomenal. As you know, we are four years old. Our sales in that time have gone over \$200,000, and there are twelve hundred interments in our cemetery.

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I attribute the success that has been made in Graceland entirely to our chapel, and if I were going to put in other cemeteries, the first thing that I would do would be to arrange with you about putting chapels in them. If more chapels were erected in the cemeteries of this country it would be the means of not only increasing their sales, but it would be the means of more pride being taken in said cemeteries and would make a better condition all around.

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I want to thank you again for persuading me to put it into Graceland. With my kindest personal regards, I am,

Yours respectfully,

A. M. JACKSON, Managing Trustee.

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Vol. XXIV., No. 11

JANUARY, 1915

SPECIAL FEATURES IN THIS ISSUE

Selling Cemetery Lots on Credit—Tree Walks and Talks in the Parks—
Developing and Managing a New Cemetery—Planning a Modern Small
Town Cemetery—Landscape Features of San Francisco Exposition—Motor
Trucks for Cemetery Work—Cemetery Work by Cemetery Employees



ENTRANCE TO SOUTH MOUND CEMETERY, NEW CASTLE, IND.
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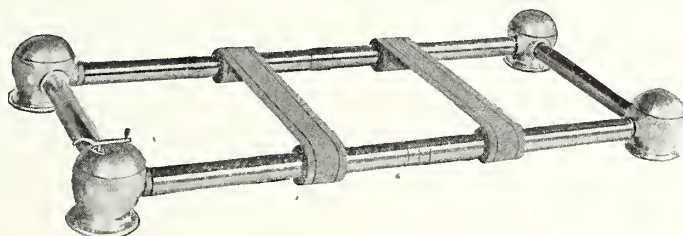
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JANUARY, 1915

EDITORIAL

VOL. XXIV No. 11

Progress of Insect Pest Campaign

The control of such dangerous insects as the gypsy moth, cotton-boll weevil, alfalfa weevil, green bug, and potato tuber-moth, has kept the office of the United States Department of Agriculture's entomologist busy during the past year, and special attention has been given to insects injuring forests. The gypsy moth campaign, waged also against its cousin, the browntail moth, has been very encouraging, there being a marked decrease this year in the numbers of both these pests. Parasites and beetles that attack these dangerous insects have been introduced and have been largely instrumental in bringing about good results. Colored posters were prepared by the office, illustrating the gypsy moth and its natural enemies, and these were posted in all post-offices and town offices in the infected districts and copies were sent to granges and public libraries. The campaign has also been waged by mail and boy scouts who have distributed cards bearing the same illustrations. A combination spray, composed of lime-

sulphur, arsenate of lead and nicotine, has been used successfully during the year by many orchard growers to control insects and fungous diseases. Other poisons to control orchard insects have been developed and are now being tested. Arsenical sprays are being made more practicable for use in combating cranberry pests in New Jersey. Effective spraying has also been done in the pecan orchards of the South, interested growers aiding the department in the work.

Violets growing around a cotton field seem to give another cotton pest, the red spider, an opportunity to work, and the department recommends the destruction of this harmless-appearing flower to control the spider. Other measures suggested as a result of investigations in South Carolina are the destruction of winter food plants and pokeweed around fields, the plowing of wide dust barriers around isolated infested places, and spraying with potassium sulphid.

Forest Exhibits at California Expositions

Part of the government's exhibit for the California exposition at San Diego has to do with the national forests of New Mexico and will be shown in the New Mexico building, the exhibit having been prepared in co-operation with the State Board of Exposition Commissioners of that state. The material also shows specimens of the principal timber trees of New Mexico and their uses. Other exposition material is to leave soon for San Francisco, where it will form a part of the Panama-Pacific Exposition, which opens February 20. Part of this is being prepared through co-operation between the forest service and the United States Civil Service Commission. The commission passes on the qualifications of all candidates for positions in the forest service, testing the fitness of those who wish to become forest officers through

outdoor examination in riding, surveying, timber estimating and similar matters, as well as by more conventional methods; its exhibit will illustrate the duties of these officers.

Co-operation also exists, in the preparation of exhibit material, between the Forest Service and the Bureau of Education. This shows how forest subjects are used in the public schools, in connection with nature study, commercial geography, agriculture, and the like. One of the exhibits is a display made by the normal school pupils of the District of Columbia, in which a number of those who are studying for teachers' positions entered a prize contest on tree study. Each of the contestants prepared a separate exhibit showing the life history and the products of individual trees, such as white pine, hickory, or sugar maple.

Editorial Notes

The U. S. Department of Agriculture is calling attention to the introduction and establishment in America of the European pine shoot moth, which threatens to cause serious loss. This insect is a small orange-red moth, the larva of which hollows out new buds and kills or injures the ends of twigs of pine trees. This injury causes a deformity which is serious in ornamental trees, and in trees grown for lumber makes a crooked growth and a consequent waste when the tree is cut. In Europe the insect not only attacks all native pines, but is equally injurious to American species cultivated there. The Department states that the young larvae came into this country within the buds on imported pine seedlings which have come from France, England, Holland, Belgium or Germany. The department's investigators have discovered it in only ten localities, in six states from Massachusetts to Pennsylvania, but it is likely that it may be found in other localities. The department hopes that the new pest may be stamped out before it becomes too widespread to be controlled. At present the problem of its elimination is confined mainly to nurseries, but if it once gets into the native pine forests the experts think that it would be beyond control. Further information in regard to the insect may be obtained by application to the Bureau of Entomology, Washington, D. C.

The fact that a number of manufacturers of fertilizers are now using treated nitrogenous trade wastes, such as hair, fur, garbage,

and other animal and vegetable matter, as bases for fertilizers, has led the Bureau of Soils of the U. S. Department of Agriculture to investigate the effect of processing on these substances. These substances in their raw state contain a certain amount of nitrogen, but in a form which it is difficult for the bacteria of the soil to break up and make fully available for plant use. Such treated fertilizing materials have been tried out in the department's laboratory, and the results of these processes have been recorded in Department Bulletin No. 158, "The Nitrogen of Processed Fertilizers." This bulletin, which is designed to be helpful to fertilizer chemists, gives in detail the various chemical changes which take place in the materials when treated by different processes.

Charles Willis Ward, of California, has offered to contribute \$25,000 toward the purchase of 20,000 acres of land covered with mighty redwood trees, near the mouth of the Klamath River, for a great public park. The location is on the south side of the stream, surrounded by high mountains, and is an ideal spot. The trees are of the most wonderful growth, some of them being more than thirty feet in diameter and upwards of three hundred feet in height.

The best forested area in China is Manchuria. The principal tree varieties are pine, cedar, larch, fir, yew, oak, ash, elm, walnut and birch.

ORGANIZING and DEVELOPING A MODERN CEMETERY

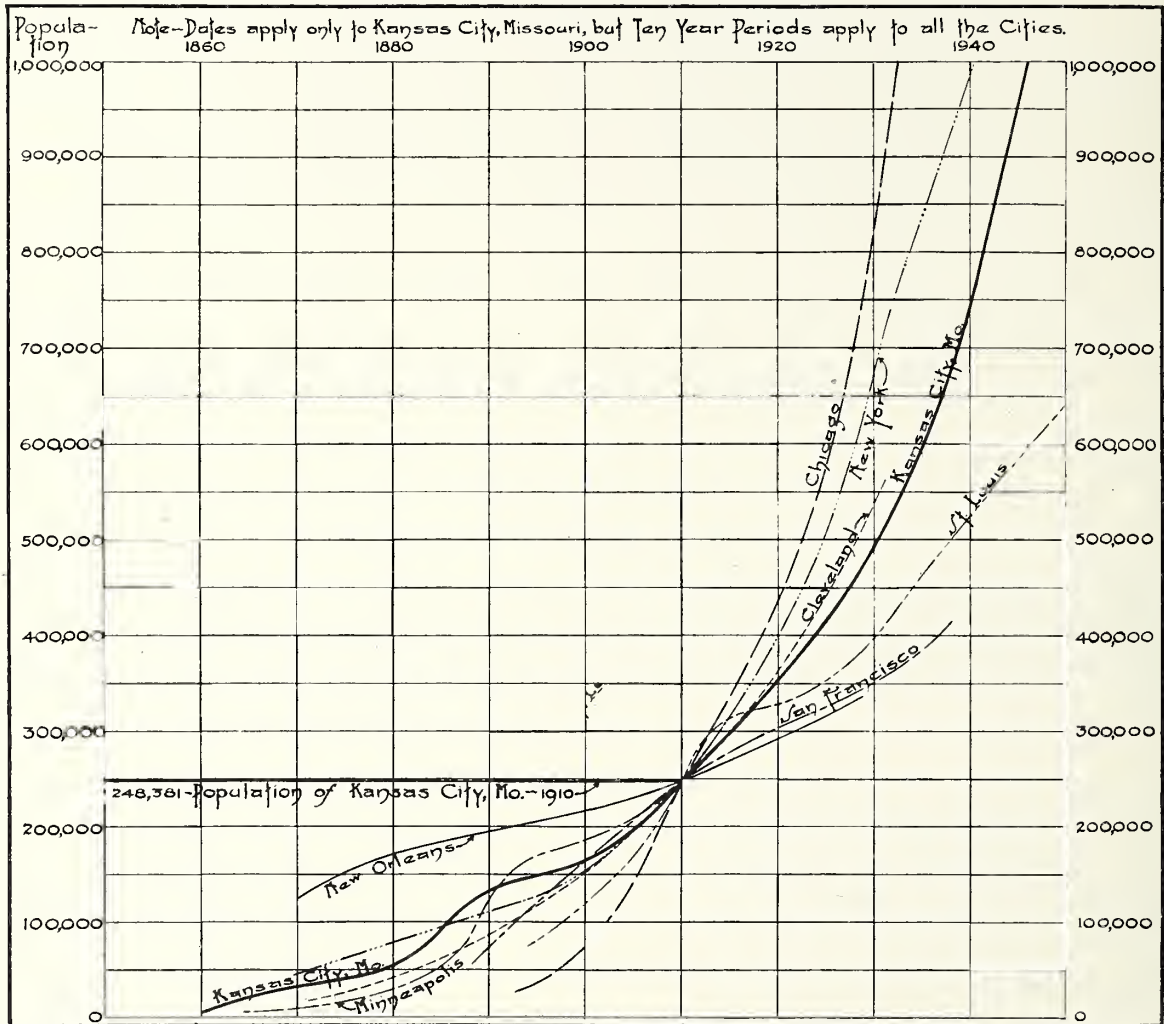
By Sid J. Hare and S. Herbert Hare,
Landscape Architects, Kansas City, Mo.

I.—The Cemetery Requirements of a City.

The "Modern Cemetery" or the "Modern Park Cemetery" are terms much used

The modern cemetery may properly be considered a public utility. While many of the most successful burial grounds have been, and now are, operated by individuals

The death rate will vary considerably in different cities, depending upon living and housing conditions, foreign or negro population, climate, and other factors. As a



PROBABLE INCREASE IN POPULATION OF KANSAS CITY, MISSOURI

and sometimes abused. While we continue to use the word "modern," the real active development of this class of burial ground began in our country many years ago. The term, as we take it, really applies to cemeteries which were a reaction from the more or less unsatisfactory and hideous graveyards of former days. The more important ideas apt to be conveyed by the term "Modern Cemetery" are: the recognition of the possibilities of greater beauty through applying the principles of landscape composition, as employed in landscape architecture or landscape gardening; more especially the development of natural or naturalistic, or, in other words, park landscape; the adoption of such rules as will safeguard the unity and beauty of such landscape treatment; and the application of modern business methods, including adequate provision for the future.

or corporations, the general trend toward municipal ownership of utilities of all kinds may have some effect in the future.

In locating and organizing an industrial establishment for the production of a certain article, the first thing to be considered is the demand for the product. In establishing playgrounds in our cities the number, location, extent and equipment would depend upon the demand; that is, the present or future population which they will serve. So in the case of a cemetery, whether owned and administered by a private corporation or by the municipality or community in which it is located, the first consideration should be the real demand. This can be studied through the local statistics of death rate, per capita wealth, growth of population, as well as proximity to other communities which might be served, and other local conditions.

whole the death rate is declining in the United States. In the registration areas, that is, in communities or districts where records are kept, the rate has decreased from 19.8 per thousand in 1880 to 14.1 in 1913. This decrease seems to be quite steady and regular, and therefore reliable. Upon examination it is found that the variation in death rate in the various cities is mostly in the lower classes or foreign population, the classes that contribute to pauper graves, or are buried in cheap single graves, or separate cemeteries. Good examples of this variation can be found in the Southern cities, where the percentage of negro population is great. For instance, in 1910 the death rate in Atlanta, Georgia, where the colored population is one-third of the total, was 18.9 per thousand (15.5 for whites and 25.5 for colored); in Mobile, Alabama, where the negro population

is 44.2%, the death rate was 23 per thousand (17.8 for whites and 29.5 for colored). In New Orleans, where the negro population is 26.4%, the rate is 21.3 per thousand (17.2 for whites and 32.7 for colored). In Washington City, where bad housing conditions among the poorer classes, especially the negroes, are well known, the rate is 19.6 for the city as a whole. The colored population is 28.7% of the total and the death rate among them is 29.1 per thousand as compared with 15.8 among the whites, almost double.

Some of the Northern cities show an interesting comparison for the year 1910. New York was 15.4 per thousand, Chicago 15.5, Kansas City 16.3, Detroit 16.7, Denver 15.4, Omaha 13.8, Cambridge, Massachusetts, 13.5, and Boston 17.4. These cities show a wide range of living and working conditions in respect to industrial occupations, congestion of population, climate, parks, playgrounds, etc.; and yet the range in death rate is very small. Some of the younger rapidly growing cities of the Pacific Coast show a remarkably low rate which is no doubt temporary and due both to the fact that there is little congestion or bad housing as yet, and that the population is largely made up of people in the more vigorous ages where the death rate is very low, and with a very small percentage of very young or very old people, the ages where the death rate is high. Spokane, Washington, is about 9.8 per thousand, Seattle 9.6, and Portland, Oregon, 10.7. It would seem, therefore, that about 15% would be a liberal average rate in the classes which would contribute to a modern cemetery of the class we are to consider in this article.

The growth of a city in the future is always an uncertainty. However, the best way of arriving at any definite conclusions in this regard is to study the growth of larger cities of similar character, situation and advantages from the time they had the same population as the city in question. The increase of population of these cities can be plotted graphically on a chart and an average curve drawn. In the accompanying diagram Kansas City is taken for an example and shown in relation to other cities which are similarly located in not having larger cities within 250 or 300 miles, and have similar conditions otherwise.

Another factor which has to be considered is the tendency in the larger cities to ship many bodies back to the smaller towns and rural communities, where the family ties of the deceased may be. In cities of 200,000 to 300,000 as many as 30% may be sent away for burial.

Burial in the ground is the almost universal method of the disposition of the human dead, a well established custom based upon centuries of tradition and religious influence, and therefore likely to be slow to change. Cremation is undoubtedly becoming more popular, especially in the

larger cities, but has as yet made no appreciable change in the totals. Other methods more economical in the use of space than the grave in the ground may come into use, but at present the percentage is very small, almost negligible.

In a well designed cemetery of the modern type, economically arranged, the land devoted to entrance, roads, paths, ornamental and reserve ground, lakes, administrative and service buildings, such as office, lodge, chapel, public vaults, greenhouses, stables, etc., will amount to about three-sevenths of the total on an eighty acre tract, leaving for sale approximately 5,000 lots of 400 square feet each or about 62 lots per acre. Of course as the size of the cemetery varies, the area required for the entrance, building, and service portions being more or less fixed, the percentage of salable land remaining will vary slightly. In a cemetery of 40 acres the proportion might be slightly less than the 62 lots per acre, while in a 200 acre tract a somewhat greater number than 62 lots per acre might well be expected, provided topographical conditions did not cause waste land or an unusual number of roads. In considering some of the cemeteries designed by the writers it was found that one of 13 acres, more than amply provided with roads and reserve ground, had 39 lots per acre, one of 31 acres, rather sparingly provided with roads and reserve ground, had 72.5 lots per acre, one of 39 acres, showing a good average use of the land, had barely 60 lots per acre, and one of 160 acres, with considerable rugged waste land, had 61.5 lots per acre.

On an average ten burials are made to each lot of 400 square feet, which size is assumed as a unit, pending further discussion of the subject in later articles. This would allow 620 burials to the acre over the whole cemetery. In many cemeteries or parts of cemeteries, in the single grave sections at least, twice this number are buried, but to offset this, many family lots are held for years with only one or two graves, and perhaps are never more than half filled, the remaining area being preserved for lawn or used for planting, or monument. Then there is the large lot of the very wealthy, equalling from four to ten times or more the size of the unit we have assumed. In some of our larger cities many of the wealthy families have lots of over 10,000 square feet used as a setting for a mausoleum, monument, or otherwise improved, but with comparatively few interments. Lodges and societies often purchase large tracts which are not entirely used for many years. In many cases sales to individuals are made years in advance of any interments, based wholly upon provision for the future. This is especially true in cemeteries owned by individuals or corporations, whose main object is the sale of land by more or less intensive business methods.

However, we can see that 620 interments to the acre would be the average limit of ultimate use for the higher class cemeteries at least. As a matter of interest, but of no special importance to the article, it might be stated parenthetically that with approximately 1,200,000 deaths per year in the United States it is requiring nearly 2,000 acres of cemetery land or about three square miles, surely a large amount of valuable land in the suburbs of our towns and cities. Statisticians estimate that in 1960 the population will be 200,000,000, more than twice the present, and while the death rate may decrease, the requirements each year will be approximately twice as great as at present. Taking 1960 as an average for the next century it would appear that in the neighborhood of 400,000 acres of land will be needed, a tract of land 25 miles square. Such figures can be considered thoughtfully with no injustice to our loved ones who have passed beyond this plane of mortal existence.

In concluding this consideration of statistics we might well apply some of the figures to a small town or city, say for example of 20,000; not suburban to any larger city. It might be assumed that in such a city the number of bodies shipped out would equal the number shipped in; that the per capita wealth would not be very great, and that the death rate would be about 15 per thousand. At this rate the deaths would be about 300 each year, requiring a total space equal to 30 lots of 10 graves each or one-half acre of the cemetery area. Therefore, a cemetery of 80 acres would last the community 160 years if the population remained the same. The demand for family lots, however, in advance of use or in excess of the area needed for actual use would probably make the yearly sales from three to five times greater and decrease the length of time of sale by that much, making the active period of sale in such a cemetery 50 years or less. Again, such a community, if advantageously situated, might reasonably be expected to increase in population at least 50% each ten years, which would make a city in excess of 56,000 at the end of 25 years; using 84 lots per year, or about 150,000 at the end of 50 years, using 225 lots. The average use throughout the 50 years would be about 100 lots per year, or the entire cemetery of 5,000 lots would be filled in 50 years instead of 160. With the cemetery entirely filled in 50 years, the available land would no doubt be sold for future use by the end of 25 years or less. When the land was completely or practically sold out, even though the cemetery would not be filled with graves for years to come, provision would have to be made for a new cemetery or an extension to the old one for the use of the coming generations.

(To be continued.)

COST DATA ON RESURFACING MACADAM ROADS

Queen Victoria Park, Niagara Falls, Ont., has completed some interesting road building work and Superintendent John H. Jackson in his annual report gives some interesting figures of the methods and costs of this work.

oil applied hot to this surface the road was satisfactory for traffic all during the season.
In the fall of 1911 an experiment was tried with very heavy asphalt running to 90%, remaining as a residuum after the

THE LIGHT RESURFACING WATER BOUND MACADAM ROADWAY.
Time—August 5th, 1913, to October 21st.
Average length of haul—3.4 miles from M.C.R. siding, Chippewa.
Area treated—Length 14,625'—2.77 miles; width 18'—29,250 sq. yards.



BITUMINOUS ROAD, NIAGARA RIVER BOULEVARD, QUEEN VICTORIA, NIAGARA FALLS PARK.

The maintenance of the macadamized roadways is entailing a large item of expenditure, particularly from the heavy teaming caused by power company construction. The usual treatments of asphalt were completed early in the season and blinded in with fine limestone and in some cases gravel, but with the heavy traffic this was found to cut through in places, and a rutted condition was the result. To properly repair this a new method was adopted last year, namely, to apply the rocmac process to each separate depression and rut. The worn area was carefully picked out to a depth of about three inches, and limestone screenings mixed with the rocmac solution placed in the bottom. Two-inch limestone was then added, and the whole rolled and consolidated to form a new crown to conform to the section of the original roadway. This method has been particularly successful on the main drive, which has perhaps the largest and heaviest traffic of any road on the park system. With the asphaltic

distillation of the lighter oils from natural asphaltic products. The manner of this construction was to lay two-inch stone upon a consolidated subgrade and pour in the asphalt heated to about two hundred degrees, and then to roll the metal thoroughly after blinding in with fine limestone. This plan proved successful in consolidating the road metal, and but for a small area that was constructed in cold, wet weather, where a proper bond could not be obtained, the roadway was very satisfactory for traffic, and entirely shed water without allowing it to penetrate through.
In finishing up a five-mile stretch of Niagara River Boulevard a detailed table of cost data was kept. Part of the mileage required a light resurfacing, and another portion required the entire reconstruction of the top courses. For these two operations the following figures will show in detail the amounts that were spent per square yard:

LABOR.			Per
	Total	Sq.Yd.	
Loading 2" Stone and Screenings.	\$232.56		8 cts.
Hauling	442.95	1.51	
Pumping and Watering	45.29	.15	
Repairing Roadway	275.18	.94	
Rolling and Spiking	97.29	.33	
	\$1,093.27	3.73	cts.
MATERIAL.			
2" Stone—205.5 tons at \$1.25....	\$256.88		.88 cts.
Screenings—150.2 tons at \$1.00....	150.20	.51	
	\$407.08	1.39	cts.
Total	\$1,500.35	5.12	cts.
Remarks: 297 cubic yards of Stone and Screenings were placed on 29,250 square yards.			
1 cubic yard of Stone and Screenings was placed on 98.5 square yards.			
Ratio of 2" stone to screenings used—1 to .731.			
Ton-mile cost of hauling materials—36.2 cts.			
Wage rates:—Teams, 55c per hour; laborers, 22c per hour; foremen, 30c per hour. Cost per mile, \$540.00.			
THE HEAVY RESURFACING WATER BOUND MACADAM ROADWAY.			
Time—August 1st, 1913, to December 15th.			
Average length of haul—1.98 miles from Black Creek siding.			
Area treated—Length 14,467'—2.74 miles; width 18'—28,934 square yards.			

LABOR.	Per	
	Total	Sq. Yd.
Loading 2" Stone and Screenings..	\$ 521.00	1.8 cts.
Hauling	1,509.00	5.2
Pumping and Watering	215.00	.8
Repairing Roadway	547.00	1.9
Rolling and Spiking	425.00	1.5
	\$3,217.00	11.2 cts.

MATERIAL.	Per	
	Total	Sq. Yd.
2" Stone—750 tons at \$1.10.....	\$825.00	2.9 cts.
Screenings—324½ tons at \$1.10....	357.00	1.2
	\$1,182.00	4.1 cts.
Total	\$4,399.00	15.3 cts.

Remarks:—\$95.4 cubic yards of Stone and Screenings were placed on 28,934 square yards.
1 cubic yard of Stone and Screenings was placed on 32.3 square yards.

Ratio of 2" stone to screenings used—1 to .433.
Ton-mile cost of loading and hauling materials—32.3c.

Wage rates:—Teams, 45c per hour; laborers, 20c per hour; foremen, 30c per hour. Cost per mile \$1,600.00.

At Queen Victoria Park rates for teams .55c., and men .22c.; the above ton-mile cost would be 38.4c.

In connection with the scarifying and recrowning of this section of roadway a bituminous top was laid on a two and three-quarter mile length, and the following figures show the cost of different operations in connection therewith:

TARVIA "A" AND ½" STONE SURFACING.

Time—September 2nd to October 16th, 1913.

Location—Boulevard roadway, vicinity of Usher's Creek.

Length or haul—3.4 miles.

Area treated—Length 14,625' = 2.77 miles; width 18'—0" = 263,250 square feet = 29,250 square yards.
Depth—½-inch.

COSTS.	Per	
	Total	Sq. Yd.
Loading, hauling and placing stone	\$861.05	2.90 cts.
Loading, hauling and placing tarvia	353.71	1.19
Placing and removing plant.....	56.50	.19
	\$1,271.24	4.28 cts.

MATERIALS.	Per	
	Total	Sq. Yd.
½" Stone—487.5 tons at \$1.30...\$	633.75	2.14 cts.
Tarvia "A"—14,307 gals. at 10c.	1,430.70	5.58
Freight, \$188.35; Demurrage, \$32.00	220.35	
Soft Coal for heating and operating roller	88.90	.30
	\$2,373.70	8.02 cts.

Total	\$3,644.94	12.30 cts.
2.77 miles cost	\$3,644.94	
1 mile cost	1,300.00	
1 square yard cost.....	12.30	

This was a carpet treatment undertaken with refined tar, known as Tarvia "A." The material was shipped in tank cars to the nearest railway siding, and heated by means of a steam boiler to a temperature of 100° F., when it was forced by steam pressure into the distributing apparatus, and then hauled to the site of the work, where it was attached to the steam roller. Connection was here made with the boiler

and the material further heated to a temperature of between 175° and 200° F. Steam pressure at thirty-five pounds was then applied to spray it onto the road surface. The apparatus used is supplied at the rear with nozzles so constructed that upon the application of pressure the hot material is forced to the surface of the road in a fine spray. The heated tar penetrates the top surface, and the remainder is then absorbed by means of one-half inch stone chips in the proportion of one cubic yard over about sixty-five square yards of surface, giving a depth of stone and tar equal to a little over one-half inch. The quantity of bituminous material for this treatment was one-half gallon to the square yard and as indicated the total cost including labor was 12.3 cents per square yard, or about \$1,300 per mile for an eighteen-foot roadway. It is estimated that the only cost of upkeep to this surface will be an annual tar spraying of about one-eighth of a gallon per square yard at a cost of between three and four cents per square yard, or about \$320 per mile for an eighteen-foot roadway.

SELLING CEMETERY LOTS ON CREDIT—I

Symposium of Methods and Forms Used by Many Cemeteries in Lot Sales and Collections

The widespread interest in a more systematic study of methods of business administration and financial management of cemeteries has led to frequently expressed desire for information on better methods of selling lots and securing prompt payment for lots. Ways of collecting for lots sold on the installment plan are especially desired among our readers. For the purpose of gathering some definite information as to current practices in selling lots on credit, PARK AND CEMETERY recently addressed to a number of cemeteries the following letter:

Several of our readers have expressed a desire to know more about selling lots on credit, and we are endeavoring to secure a helpful interchange of experience on this subject from cemeteries that have tried it.

Will you assist us by answering the questions below or giving us any other information you can:

Have you ever had lot holder discontinue payments before lot was fully paid for?

What course did you take to collect the money?

What success did you have?

Did you ever have to remove a body from a partially paid for lot? Do you know of any instance where this was done; if so, where.

Would the law of your state allow you to do this?

What arrangements and what contract do you make with installment buyers of lots; please enclose form of contract and tell us how you proceed to collect money due?

The following extracts from replies received and copies of forms used in selling and collecting will suggest a variety of methods of getting better results in selling lots on installments:

It happens quite often with our company that persons endeavoring to pay on their lot accounts lose interest and show no disposition to further their payments. We

then send them a thirty days' notice, the form of which I am inclosing, and I find it has a very good effect on getting the lot holders to pay their arrearages. This notice reads as follows:

Under an agreement between you and the Arlington Cemetery Co., dated, you agreed to purchase the right of sepulture in lot in section, and to pay therefor in installments. You have paid nothing since, and under the terms of your contract the company has the right to cancel the agreement.

At the last meeting of the Board of Directors it was resolved that all those in arrears be given thirty days' notice that unless the arrearages in such case be paid the contract would be annulled.

In compliance with this resolution, I beg to notify you that unless the amount now owing by you, to wit \$..... is fully paid on or before next, your contract will be annulled and all payments made thereunder will be forfeited to the company.

It is the hope of the directors that all those who have contracts for lots will pay up. The lot in which you have an interest is more valuable today than when you contracted to buy it. The cemetery is proving itself a success. It is daily growing in favor. The management is liberal and up-to-date, and there is every prospect of ultimately making Arlington one of the most beautiful cemeteries in the country. You will be foolish to let your contract be annulled.

Kindly acknowledge receipt of this notice.

I am also inclosing a copy of an agreement which is signed when the first payment is made. When there is a body, or bodies, in the lot purchased and they make no effort to make the payments as agreed, after a few payments have fallen due and not been met, we then write them that their body will be moved to a single grave and all money paid on the lot will be forfeited. This we do not have to do very often, but in a number of cases has been necessary,

so that we could place the lot on sale again. You will find we have a right to do this as per printed form of agreement, signed at time of purchase. This agreement reads as follows:

THIS AGREEMENT, made this..... day of..... A. D. 19....

WITNESSETH, That THE ARLINGTON CEMETERY COMPANY, of Philadelphia, agrees to sell and of agrees to purchase the right of sepulture in lot No..... size in Section of said Cemetery Company's ground for the price or sum of Dollars upon the following terms and conditions, to wit:

The first payment of Dollars to be made at the time of the execution hereof and subsequent installments of Dollars each shall be payable on..... at the office of the said Company or its authorized collector until the full consideration above mentioned shall have been paid.

The privilege of making interment in said lot will be granted, provided only that all instalments then due shall have been fully paid, and all other claims of the said Cemetery Company then matured shall have been liquidated, and further provided that at least one-third of the principal of the purchase money above specified shall have been paid.

It is understood and agreed that the right of sepulture in said lot is sold on the terms and conditions hereinabove expressed, and subject to any and all by-laws, rules and regulations now in force or that may be hereafter established by said Arlington Cemetery Company, from time to time. It being distinctly understood that this agreement shall not nor shall any deed made in pursuance thereof, give to or vest in the purchaser any right to inter in said lot any thing other than the remains of white human beings, nor shall any interment be made except upon a permit issued by the Cemetery Company in accordance with its rules and regulations.

The purchaser further agrees that if three of the installments hereinabove designated shall become in arrears and remain so for a period of six months, all claims to the said lot and rights therein shall be deemed released to said Cemetery Company, which shall have the right to retain, as liquidated damages, all sums theretofore paid, to remove any

bodies that may have been buried in said lot, reinter them in lots in other sections of said cemetery reserved for single graves, and to resell the above described lot.

THE ARLINGTON CEMETERY COMPANY
Witness at Signing:

By
Purchaser's Signature
The other card which I am enclosing is a copy of a resolution passed by our Board of Directors, to the effect that after a certain time 6% interest would be charged on burial lots when same had not been paid for as agreed. This notice sent to our delinquents did not prove successful, as a good many lot holders said they would pay the interest and therefore we did not collect the balance and close out the account. But the thirty days' notice has proved entirely successful. The card referred to read as follows:

The following preamble and resolution was adopted by the Board of Directors of the Arlington Cemetery Company at the meeting held November 27th, 1912:

Whereas—The value of burial lots in Arlington Cemetery has increased so greatly in recent years, which increase may reasonably be expected to continue, and

Whereas—A number of those who have purchased their lots on monthly and quarterly payments have made but little effort to complete their payments within the time limit according to their signed agreement. Be it therefore

Resolved—That when the period for paying in full has been voluntarily extended by the Company, that on and after January 1, 1913, 6% interest per year shall be charged on all balances due on burial lots, where same has not been paid for as per agreement.

The resolution was seconded and agreed to.

We find the important thing in making sales, either a cash transaction or on the installment plan, is to have an agreement signed and witnessed, as we then have the permission to enforce our rights. We give a copy of the original to the purchaser and the original is filed away in an envelope under the lot holders' name. This is our protection and gives us all the rights I have mentioned above.

ARLINGTON CEMETERY Co.

By E. W. Barber, Sec.

Philadelphia.

* * *

We keep looking after lot holders who do not pay promptly and have had fair success. We have threatened to remove body for nonpayment but have never done it. The law of the state will allow us to remove bodies.

Following is a copy of our lot sale contract:

Ann Arbor, Mich., 191..
.....after date, I promise to pay to the order of the
TREASURER OF FOREST HILL CEMETERY COMPANY, OF ANN ARBOR,

..... Dollars
for the right of burial on Lot No.
Block No. in said cemetery,
with interest at six per cent, per annum.

It is expressly understood, and I hereby agree, that in case I shall fail to pay the said \$..... and interest at or within the time specified, my right to use said lot for burial purposes shall cease, and that any body or bodies interred thereon may be disinterred, by order of the Trustees of said Cemetery Company, and buried in some other locality.

* * *

Our cemetery trustees years ago adopted the cash or its equivalent plan for sale of

cemetery lots and have had no trouble. Cash or good notes is required for all lots; those sold years ago and not paid for are re-sold and unused portions of lots unpaid for are re-sold, giving deed for portion used to original purchaser. We do not sell lots on installment plan; cash or its equivalent always. Otherwise we show intending buyers the free ground.

UNION CEMETERY,

J. R. Peters, Supt.

Urichsville, O.

* * *

In a place of the size of Bloomington it is almost impossible, if not quite, to always sell lots for cash only, and there are times lots are not entirely paid for. We ask for enough to cover the part occupied and if lot is not entirely paid we give title to part occupied. I enclose contract we sometimes use, which reads as follows:

Bloomington, Illinois, 189..
This certifies that the Bloomington Cemetery Association has this day contracted to sell to a cemetery lot for the price of Dollars and has received on the same the sum of Dollars. The balance of the purchase price of said cemetery lot being the sum of Dollars, is to be paid on or before and in case of failure to pay said balance on or before the said forfeits the money this day paid, and, all rights to said cemetery lot, time being the essence of this contract.

BLOOMINGTON CEMETERY ASSOCIATION.

Pet

BLOOMINGTON CEMETERY ASSN.

A. J. Graves, Sec. and Supt.

Bloomington, Ill.

* * *

We sell the half of the lot not paid for, and we have not lost a cent in thirty years. We have never had to remove a body and it is a question unanswered by the courts as to whether we could or not. Following is a copy of our lot sale form:

DANBURY CEMETERY ASSOCIATION.

Article X. Lots must be paid for within three months of agreement to purchase. If not paid for by that time the agreement is void at the option of the Association. If any interments have been made in a lot not paid for within the specified time, it must be vacated within ten days after notice by the Secretary. In case of neglect to do so the body or bodies may be removed by the Association to the Free Ground at the expense of the party agreeing to purchase. Said expense can be taken from the money paid on said lot, or the Association may sell the unused portion of the lot. The Association reserves the right to prohibit interments in lots not paid for within the time limited.

Danbury, Conn., 191..
Received of Dollars in payment for Lot in Wooster Cemetery, which ha..... agreed to purchase of said Association.

..... Secretary

* * *

We have had purchasers of lots discontinue payments before completing full payment.

We have a rule that no work or interment on a lot unpaid for will be permitted until all arrearages are paid. This usually

brings them to time, although we sometimes have long to wait.

We now, in giving credit, require a note with approved security, drawing 8% interest. We find this rule works to our interest, as the purchaser usually gets the money elsewhere at a less rate.

We have never removed a body for non-payment and I know of no such instance. We have taken the unoccupied portion of the lot back and used it for single interments if we did not find a purchaser that it would suit. Our state law would not permit a removal on such conditions. No deed is given until the lot is fully paid for. We make no contract for installments. Simply credit any payments made before the note is due, on the note. Our usual terms for sale of lots and all work is cash, if possible. Some years since we did a credit business and it will take us many years to recover our loss on the old accounts under the rule mentioned.

GRACELAND CEMETERY,

G. C. Anderson, Supt.

Sidney, O.

* * *

If debt is enforceable by law we resort to that process. If not enforceable, we sell the remainder to other purchasers. We always require an advance payment sufficient for the unused part of lot. We make no deed until lot is fully paid for.

We never lose any money for purchase of lots by this course. Having under last rule secured an amount sufficient to pay for spaces we do not have to remove the remains of the dead.

Under the laws of Indiana, conferring power to cities to establish cemeteries, is sufficiently broad to authorize removals.

We open an account with purchasers as in any other case, charging the purchase price upon the ledger, and giving credit for amounts paid, and when fully paid we make deeds granting to lot holders all privileges of burial, etc., prescribed by the rules and regulations ordained by the City Council.

CROWN POINT CEMETERY,

J. W. Cooper, Supt.

Kokomo, Ind.

* * *

My method of the sale and collection for cemetery lots may be a little bit different than if the cemetery was in the hands of an association. I believe that I am the only person in the country that I can hear of that owns a cemetery. Lots are sold for cash unless I know the people personally; if I do not know them they must pay for the lot before burial, or before the grave is made. When I took charge of Graceland Cemetery several years ago there was quite a lot of money due for lots that had been sold and I have collected most all that was due. There is about \$100 that I will never get, as the buyers have moved away or are all dead and I can not find them. I had to threaten one person to pay and if he did not pay by a certain time I would

have the sexton remove the body over into the pauper row. He paid. Under the laws of Kansas when a person buys or contracts for a lot in a cemetery he is deemed the purchaser and the body cannot be removed for failure to pay for the lot, but I can sell the balance of the lot up to within one foot of the body that is buried thereon. I do not make any contract with a person in buying a lot for partial payments, as the prices I charge are so low that anyone can afford to have a full lot. My lots are 10 by 20 feet in size and they sell for from \$10 to \$50 per lot. I will enclose you a copy of the Rules and Regulations of Graceland Cemetery and I enforce the same with every one. Graceland Cemetery consists of ten acres of laid-out ground and ten acres of ground that can be laid out at any time. I wish to sell the cemetery, as I have too much other business on my hands and will have to let part go. I hold the cemetery and ground in reserve at \$5,000. It will pay on an average 6% and there are no taxes in Kansas on cemeteries.

GRACELAND CEMETERY,

R. H. Kent, Supt.

Burlington, Kas.

* * *

We sell lots on contract, which reads as follows:

This Agreement, made this day of 1911, by and between THE LINDENWOOD CEMETERY and, witnesseth:

That the said Cemetery, in consideration of the sum of Dollars, this day in hand paid to it by..... the receipt whereof is hereby acknowledged, and the payment to the said Cemetery of the further sum of Dollars in three annual payments, with interest at the rate of six per cent per annum, without relief from valuation or appraisal laws, as follows: Dollars on or before 1911, Dollars on or before 1911, Dollars on or before 1911, hereby agrees to sell, to the party of the second part, his heirs and assigns the following described burial lot, to-wit: Subdivision No. of lot No. in Section in the Lindenwood Cemetery, in Section Number Four, Township Number Thirty North, Range Twelve East, in Allen County, Indiana, a plat of which Cemetery and plats of the subdivisions of the same into sections and burial lots are in the possession of the trustees of said Cemetery, to which plats, for the identification and location of said burial lot, reference is hereby made.

And upon the full payment of said last sum within the time aforesaid The Lindenwood Cemetery agrees to convey said lot to the said his heirs and assigns, forever, by a deed in accordance with the form now or hereafter determined and provided by the trustees of said Cemetery, with all the privileges, and subject to all the conditions, restrictions and requirements contained in the By-Laws, Rules and Regulations adopted, or which may hereafter be adopted, by the trustees of said Cemetery.

It is hereby expressly agreed and understood that if the said party of the second part shall refuse, fail or neglect to pay said sum of Dollars, or any annual payment of said sum within the time aforesaid, then all the right, title and interest of said party of the second part, his heirs and assigns, in and to said lot, shall cease and determine, and the said Cemetery shall have the right to take immediate possession of said lot and shall thereafter own the same as absolutely as if this contract had never been made, and may sell the same or any part thereof, and remove the remains

of any body buried therein to any other part of said Cemetery, and all payments made thereon or under this contract shall be held by said Cemetery as rent for the use of said lot in the meantime.

In Witness Whereof, the said parties have hereto caused their names and seals to be affixed this day of A. D. 1911.

THE LINDENWOOD CEMETERY.

By Secretary [Seal.]

We have had lot holders discontinue payments before the lot was fully paid for, and in every case we have tried to bring about a settlement without resorting to harsh measures. If the purchaser can not pay the balance due on contract and if sufficient amount has been paid to cover the portion of lot occupied, we give a deed to such portion and take back the balance of the lot.

In cases where the purchaser refuses to make payments when due, we wait until the holder has need to make an interment and then we refuse burial in the lot until payment of all money due on the contract has been made, and we find this method to work very well.

We have never removed a body from a partially paid for lot, nor do I know of any instance where this has been done.

Our attorney informs us that we could make such removal under the contract as entered into between the purchaser and the cemetery.

LINDENWOOD CEMETERY.

H. J. Doswell, Supt.

Ft. Wayne, Ind.

(To be continued.)

TREE WALKS AND TALKS IN THE PARKS

An Address before the New England Park Institute by G. M. Headle, Springfield, Mass.

Among the many complex phases of park activities of today the newest is perhaps the "Walking Talk on Trees."

Nature study in some form has ever been of vital interest to man, at first as a

means to live, and later from a sense of the love and appreciation of the beauties and the wonders of the outdoor world as well.

Besides the preservation of the plants

and the development of the art of gardening, the park departments are taking up the study of the parks as the recreation grounds of the city. "Walking Talks on Trees," of some educational value, may be



CONDUCTING ONE OF THE "TREE WALKS AND TALKS" IN HARTFORD, CONN. PARKS. Not only trees, shrubs and planting, but grading, walks, roads and other subjects are discussed.

classified as a recreation and are usually considered as such.

In our climate the average amateur student of nature turns to books when the flowers are gone and most of New England's trees are bare. However, for some time many of the agricultural colleges and various institutions interested in the study of horticulture have been teaching the characteristics and identifications of trees during the winter season. Led by the instructor the students walk through the arboretum or woods where various trees are noted and classified at first hand. Talks and lectures of a more popular nature were conducted by the management of Arnold Arboretum of Harvard University. The Hampden County Horticultural Society conducted a talk on the trees of Forest Park, Springfield, last April. All of these talks have been very well attended.

In the fall of 1913 "Walking Talks" for the public were conducted in the Boston public parks, under the leadership of Mr. Fisher of Franklin Park. During the same season Supt. G. A. Parker introduced the "Walking Talk" on trees, shrubs and planting effects in Hartford public parks. Talks were conducted through the many public parks and Supt. G. H. Hollister personally conducted several successful walks in Keney Park. The walks will be continued in Hartford this season.

As leader of the walks in the public parks of Hartford last fall I suggest the following:

Selection of Route.

Select if possible a route having a variety of native and introduced trees. Groups of trees as well as specimens and occasionally an opportunity to identify trees at a distance by general characteristics and shape, give variety and therefore add to the interest. Some of the evergreens and any rare or unusual specimens give points of spe-

cial interest. Usually some trees will be found which will offer opportunity to discuss tree care, including surgery, combating insects, pruning, planting, moving, etc. Some time may well be spent on this phase of the subject, as many are personally interested, having trees and shrubs of their own needing care.

The length of the route may be determined in a general way by (1) make-up of the party, age, women and children, etc.; (2) condition of the ground to be covered, whether swampy, rocky, hilly, etc.; (3) the weather, and (4) time for walk. During cold weather the talks should be made shorter and the walking intervals longer. Talk enough to keep up the interest and walk enough to keep warm. Two miles is ordinarily the limit for an afternoon.

Keep in mind that while nearly all of the party know the common trees very few know that there are many species of oaks, that the box-elder is a maple, etc. A number of trees of one genera affords a chance to note their common characteristics and differences.

At the beginning of the walk a word about the structure of a tree and the various functions of the many parts makes a good introduction. A small gray birch may well be selected to demonstrate. The value of some definite order of describing the trees should not be overlooked. Some of my talks were in the form of lectures for the boys of the wood-working classes of the manual training schools. Many of these boys had never seen, to know them, the common trees from which their wood came. They took notes so it was advisable to follow some outline rather closely. The following met with the approval of the teachers and worked out well:

Outline.

Common Name: Give all common names

as there are many local ones. Give origin of name and meaning, etc.

Scientific Name: Reason and need of, etc. (Introduce a short discussion of the use of scientific names, their value, etc.)

Habitat and Distribution: Rocky, swamp, meadow, or other situation; native or introduced, and where found.

Shape: Habit of growth, shape of tree, size, etc.

Characteristics: Bark—color, texture, close or loose, etc.; twigs—shape, color, arrangement, etc.; leaves—shape, size, arrangement, texture, etc.; buds—size, shape, color, etc.; fruits—size, shape, color, kind, etc.

Means of Propagation: From seed, cuttings, etc.

Means of Identification: Including comparisons with characteristics of other trees.

Value: Commercially—wood—texture, durability, color, grain, hard or soft, etc.

Planting and Ornamental Uses: Shade, as windbreak; growth, formal; as specimen, as group, etc.

A much more informal talk is preferable for a general party when questions of general interest may be answered as they suggest themselves. Lists of the trees to be found on the walks were given out in Hartford. These contained the scientific and common names, the former arranged alphabetically, thus saving much time otherwise spent in repeating and spelling names. Before breaking up it is well to announce and outline the next walk.

The campfire and hot coffee and frankfurts during cold weather added much to the comfort and enjoyment of the tramps over the frozen ground and snow.

"Walking Talks" in the future could well include the entire year and the birds, animals and plants in their season. I believe that directed nature study will surely become a part of the park work as has directed play.

CEMETERY WORK BY CEMETERY EMPLOYEES

An address before the New England Cemetery Association, by Leonard W. Ross.

In the brief time allotted to me for a presentation of this important question I cannot hope to do more than make a few suggestions which may result in bringing to the surface in the discussion which, we hope, will follow a far better answer than I am able to make; for there are many men present far richer in knowledge and riper in experience in these matters than the one who now addresses you.

It seems to me that in approaching a discussion of this troublesome question the solution and answer must depend largely upon the form of a cemetery organization—i. e., whether it be a corporation or privately owned; a cemetery owned and controlled by an association of lot owners whose only purpose is to maintain it

in accordance with their own desires; an ecclesiastically owned and controlled cemetery, subject to the laws, customs and traditions of the church, or a municipally owned cemetery subject to, in many cases in the years past, but of late most fortunately disappearing, the whims, ambitions and influences of the men in political control for the time being of the municipality.

I am firm in my belief, however, that no matter how organized, or by whom owned and controlled, our first care, duty and interest should be devoted to the proper service of the lot owners, and I firmly believe that no cemetery can continue successfully, agreeably and prosperously for any considerable period of time, which

grossly neglects or violates their interests, which in their very nature are different from, but not necessarily subordinate or antagonistic to our own interests.

Let me become radical for a moment, revolutionary, if you will;—not only do I believe that we should do *all* that is to be done, of every kind, name or nature that requires doing within our borders, but believe that we should design, manufacture, either by our own employees or by contract, and erect all forms of memorial structures which are placed in the cemetery, because I believe that under such conditions only can the thousands of architectural monstrosities be eliminated; but, of course, that can not, will not, be. The punishment for an interference with di-

vine personal rights would be speedily invoked upon the man or body of men who were to attempt it. It could only be possible through the establishment of a new cemetery or burial place to be located upon a topographical and geologically correct area, with sufficient financial backing to attract the best efforts and thoughts of artists and architects, and await sales. All lots should be located, prepared under ground as well as on the surface; memorial structures designed for each, with due consideration of environment, constructed and placed upon the lot before it is offered for sale, just as most of our people's homes are today being designed and erected, yes, sometimes furnished complete, before offered for sale or occupancy, and I am sure you will all agree that residential neighborhoods thus treated are far more attractive, desirable and financially successful than where the bare land is sold and the subsequent development left to the individual tastes of the owners, and I can think of no sound argument against the application of this principle to family burial lots. Indeed I am confident that it would prove pleasing and acceptable to a major portion of our right-minded people, as they would thus be enabled to view in its completeness the final resting place, and escape the annoyance of solicitation in their hours of greatest sorrow by the army of itinerant "Mortuary Architects." More might easily be said on this subject, but I leave the thought for future development, as I realize that I am wandering into utopianism where few will follow, and I must drop back to earth and a consideration of our ever-present daily troubles.

The matter of monument foundation construction exclusively by the cemetery employees under direction of the superintendent has become so universally established that it is hardly open to discussion. The wording of the deeds to the lot owners which came to us from our ancestors of some remote period conveys to them the right, among other things, to "erect thereon monuments, cenotaphs or other suitable memorials." "Suitable"—ah, there's the rub! Who is to determine the suitability? They are also in many cases by the specific wording of the deed given the right "to cultivate thereon plans and flowers." True, there is the usual clause, "subject to the rules and regulations now in force, or which may hereafter be adopted," tucked away somewhere in the text; but when you mildly and courteously remonstrate against the planting of a Norway spruce, for instance, which we all know will eventually reach a height and spread of sixty or more feet, upon a lot six by ten feet, or in case of a larger lot some well-meaning person plants a crimson rambler rose at the head of each of twelve graves, what are you going to do about it? Well, if the owners are persistent and

stand upon their rights as indicated by the wording of their deed, the surest remedy I know of is a 95% solution "Herbicide" hyperdermically applied, although of course I have never used it.

Seriously, however, if all of these conditions are eliminated, my observation and experience convince me that practically all lot owners will yield to courteous and sound reasoning, for after all, they mean to do right and are willing to be shown that which is best.

I believe that we should have the exclusive right to do work of that nature. It may seem hard to be obliged to do what some of them demand, but I feel that it is better to submit than to let them do it either by their own hands or through an outside agency.

In order to maintain our institution upon a sound financial basis, we must of course receive a proper compensation for the work we do and for materials furnished, which compensation usually comes to us in money payments, but we may often receive adequate compensation through the general benefit to the whole place by reason of work done in certain individual lots or even on whole sections of lots without a money payment at all. In such cases, however, we should be guided by our own judgment of what should be done, and not by the ill-advised ideas of individual lot owners who cannot or will not pay for improvement to their lots or even for their care. In the latter case I realize that we lay ourselves open to the charge of favoritism. Some people cannot by any process of reasoning be made to understand why you do things to other people's lots while theirs are left undone.

Another difficult problem met in municipally owned cemeteries, and which I fancy those of you associated with privately owned ones escape, is found in people who appear to think that because the city owns it and they pay their taxes, (usually a \$2.00 poll tax only), it should be done for them without charge, and your declination to comply with their expressed wishes convinces them that you are an incompetent and ungrateful public servant.

Although, as I have said, I think we should do all work upon lots and graves and not permit the owners to work out their own ideas without control, still we should recognize and respect the motives actuating them to spend hours periodically in building mounds of earth, planting, weeding, watering and other attentions to graves wherein lie the remains of loved ones, and I find it indeed difficult to restrain their efforts, abnormal and even hideous though they be.

Then there is the matter of burial vaults, getting to be a pressing question which I feel must be met and answered. To a considerable degree at least I feel that individual liberty should be given to lot

owners to purchase the kind or style they wish. Here is another broad field for education, and I doubt not most people if properly approached will soon follow our advice and expressed wishes. I feel very strongly that we should prepare ourselves to provide them without trouble or excessive cost with suitable indestructible vaults, and I am sure we can do so with a good profit to ourselves and at a lower price to them than can be given by any dealer, or manufacturer even, owing to the fact that we usually possess plenty of room for storage and manufacture, exempt from rent or taxation, and at certain times of each year have labor which cannot better be utilized. By making such provision and keeping our lot owners informed of our ability to supply their wants, it seems to me we can easily direct the matter into the proper channel.

I assume that you will all agree with me that the use of some form of non-collapsible vault is desirable in every interment, as we can thus be saved the labor of continually repairing sunken ground and avoid the painful necessity of often being obliged to explain the cause of the depression to people who do not understand that it is inevitable when wood alone is used.

As at present informed, I understand that this branch of the service is being administered in about as many different ways as there are cemeteries. Some of us still follow the old custom of building brick side and end wall vaults with slate top, with and without slate or concrete bottom. On these we presumably make a fair profit to which we are justly entitled. A few permit this to be done by workmen not employed by the cemetery but by the family, or by the undertaker after the excavation has been made by the cemetery employees. In some cases an extra charge is made, and I think properly so, as it involves extra labor. In other cases no extra charge is made, because perhaps payment is objected to, or for other controlling reasons. About the same condition of administration obtains in cases where all slate, metal or cement concrete vaults are used. In other cemeteries a stock of slate or concrete vaults in the required sizes is purchased and kept on hand for immediate use, for the reason that there is usually insufficient time between the receipt of the order and the time of interment to purchase and transport one from the manufacturer. Again, most of us are familiar with the method used by one active manufacturing concern (Hay & Peabody) who send their vault to the cemetery by men in a modern motor vehicle, erect it in the grave previously excavated, and remain to place the top or cover in position after the remains are placed therein. This process I find no fault with, and we make no extra charge where this is done, for the reason that we are glad to

have any vault used that will prevent the sinking of the ground at some future time. It does, however, when ordered by the undertaker, or by the family direct of the manufacturer, eliminate our profit on the work. I understand that this is provided for, however, in some cemeteries through an extra charge to the burial fees.

In this much depends, as I have said, upon the form of our financial organization. In the case of our department, having twenty separate cemeteries and burial grounds supported by an annual appropriation made by the city government, which never exceeds our requirements, we do not

like to use our appropriation which we so much need for labor and other necessities for the purchase of vaults, even though we may make a profit upon them. On the other hand, I believe we can manufacture vaults to good advantage as the only expense to our appropriation will consist of the purchase of cement and reinforcing material, as we carry our entire force of men permanently through the year and so would not feel the labor cost. The profits derived from the enterprise going to our recently established permanent fund for the maintenance of the department when all land is sold, creates a motive for earnings which did not previously exist.

In closing, I feel that all cemeteries of sufficient size and adequate organization should manufacture cement concrete vaults for sale to lot owners, that they should be supplied to them at a reasonable price, and that they should be encouraged by all proper and legitimate means to use them in all burials. The smaller cemeteries which are without facilities to do this will without doubt be able to purchase them from the manufacturer, and carry in stock, ready for immediate use, perhaps paying for them as used, making no charge for storage or handling to the maker who should be found willing to enter into such an arrangement.

MOTOR TRUCKS FOR CEMETERY WORK

Address before the New England Cemetery Association, by John F. Peterson.

The application of motor trucks to all kinds of transportation problems at the present time is hardly appreciated by the average layman. I believe the demand for them is the main cause of their high initial cost. A study of one of the leading automobile journals just issued reveals the fact that there are seventy makers of trucks, of capacities varying from 1,000 pounds to six tons, and ranging in price from \$750 to \$3,850—the last figure, I feel, leads the cemetery superintendent to believe that trucks are entirely beyond him for the economical solution of his hauling problems.

Considering the displacing of horses with trucks, there are two main questions. First, we want to know the comparative cost. Second, the method of allocation of the machines to our work. The object of this short paper is to state our experience in the handling of two trucks in the past two and one-half years, and also to make a comparison of the costs between teams and trucks. By the expression "team" I mean the horse, cart and driver; and in the case of trucks, the motor vehicle and its driver.

In 1911 we had ten horses. One driving horse, used by the assistant superintendent, the other nine used with tip-carts, express wagons, and other vehicles in connection with cemetery work.

In 1913 we had six horses, one 1½-ton truck, one 1,500-pound truck and one small passenger car for the assistant superintendent's use.

The figures here quoted in the cost mean feed, fuel and repairs of all kinds. In 1911, when we had no trucks, the cost of the ten teams was \$6,149. The cost in 1913, with six teams, two trucks and the passenger car, was \$6,986—this shows a difference of \$837 in round figures in favor of the horses. However, in 1911 the cost per team was \$615 and in 1913 the expense per team (I am speaking of teams only, you will notice), was \$767.

This is an increase in cost of \$152 per

team. This is accounted for in the increased cost of feed and labor, and also the fact that our overhead charges remain the same, whether we have six horses or ten horses. Six horses at the rate of \$152 increase would mean \$912. This, as compared with the previous figure of \$837, shows a difference of \$75 in favor of the motors.

A comparison of all trucks with all horses would be as follows:

Expense, 10 horses, 1911.....	\$6,149.00
Add depreciation of horses — 10	
horses, value \$2,500, 7 years.....	360.00

Total, including depreciation and drivers' wages	\$6,509.00
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Assuming we had two more 1½-ton trucks, based on 1913 figures the expense would be:

3 1½-ton trucks at \$1,385.....	\$4,155.00
1 1,500-lb. truck at \$1,302.....	1,302.00
1 passenger car at \$450.....	450.00

Total	\$5,907.00
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The difference between the two, showing about \$600 in round figures, is in favor of the motor trucks, and to this we should add also the increased efficiency of the work done in connection with the trucks. I will illustrate my point later in a paragraph under Incidental Advantages.

As to the methods of handling the trucks, the 1½-ton truck has two different bodies applied to the chassis in the course of a year's work. These two bodies are in turn added to, so that we have practically four bodies available.

First: The dump body, which is used in the usual manner for dirt, gravel, sand, crushed stone, etc. In the spring and fall cleaning a rack is added to this body, which increases its capacity about three times and makes it an important factor in removing leaves and rubbish from the grounds. In May, when the flowers are being set out, the dump body is removed altogether, and a two-deck body is attached

to the frame. For boxes, or large plants, the upper deck is removed and a platform body is used. In the case of the 1,500-lb. truck two bodies are available for that also, an express body and a rack body. The time required for shifting the body is small and is included in the figures for truck expenses.

The dump body was purchased with the truck; the other body, with the additions to both, was made by our own workmen during the winter months and at a comparatively small cost.

It has been suggested that the use of trailers in our work would be an advantage. I think that the application of different kinds of bodies to the chassis to accommodate the kind of work is a better method where both horses and trucks are used.

The question naturally arises as to the reliability of motors. Provided the truck is bought from a reliable firm, and at all times only loaded to its rated capacity, its reliability is equal and better than that of a horse. In the 2½ years we have had the larger truck it had to be towed home once and was out of commission two days. This was not due to any flaw in the design and construction of the motor, only the personal equation of the workman who assembled it, as he put on the large driving gear with putting cotter pins in the nuts, and the gear, of course, became loose. In the winter months, and when not urgently needed, the engine and all parts of the chassis are looked after and kept in the best possible condition. This is an essential requirement in any mechanism.

In a recent paper written by an automobile engineer he says:

"Trucks are at a disadvantage when compared with horses. The majority of teamsters have a soft spot in their heart for their teams, and the majority of owners know the limitations of the horse and respect them for humanitarian and for financial reasons."

There is truth in this statement, and when drivers and owners understand the limitations of machines, for financial reasons alone, the usefulness, reliability and life of motors will come to be recognized by everyone.

All trucks are figured with the factor of safety, and as far as we can control it, this should be respected. This is prevalent in the design of all kinds of construction work and is the life of every structure.

I think that it is generally known that the average horse and wagon travels at an average of about three miles per hour. To test the comparative rate between a team and truck, I made a test last week, the distance being between the northerly and southerly extremities of our cemetery. The truck traveled the distance in a few seconds over three minutes; the horse traveled the distance in eighteen minutes and twenty seconds. This shows practically that the truck is capable of going six times as fast as the horse. What this means in long hauls is evident.

The incidental advantages attached to the truck and the unit of cost between the horses and trucks being in favor of the trucks, as already shown, seems to me to warrant their adoption. I will cite three cases which have happened within two weeks in connection with my work, where the motor truck was of material assistance in helping to get work done on time and conveniently. One was a case where three bodies were to be removed from the chapel to the lot. All three bodies came from Chicago and were delivered by a motor truck belonging to the American Express Co. to our cemetery, and stored two days

in the mortuary room, awaiting the arrival of the people. The superintendent of interments came to me with his problem, and I arranged for the 1½-ton truck to take the bodies to the lot at 1 p. m. Both at loading and unloading the elevation was about three feet from the ground; rollers were used, and no difficulty was experienced in loading or unloading, and the work was done within three-quarters of an hour. In lowering the largest body into the grave it required eight men to handle the box.

Recently we constructed a fifty-foot chimney, of concrete. Speed is a large element in efficient concrete construction. The job was situated about a half-mile from our stables and equipment. Five minutes after starting work one morning the 1½-ton truck had brought the men and material to the job. I think that anyone here can easily imagine what the machine saved in that short period.

Again, quite recently we received notice from the customs house that six cases of bulbs were waiting for us. The truck was sent in for them, leaving our yard at 2 p. m. and returning with the six boxes at about a quarter of 5, the distance traveled during that time being about eleven miles.

As we see each year motor vehicles entering into the different fields of industrial activities, it is inevitable that the horse will disappear from our roads; for humane, sanitary and economical reasons it is desirable. The adoption of motor trucks, however, in every direction requires planning and experimenting. The extra mental effort required for their best performance will, I am sure, be amply rewarded.

MORE ABOUT ROSEHILL TROUBLES.

Another piece of alleged scandal in connection with the affairs of the Rosehill Cemetery Co., of Chicago, was recently disclosed. William C. Niblack, receiver for insolvent La Salle Street Bank, seeks an accounting for money borrowed from the bank when it was a national institution, and which, it is said, was given for the initial payment on the Rosehill stock. Mr. Niblack in a suit filed in the Circuit Court charges misapplication of the bank's funds by Charles B. Munday, former treasurer of Rosehill, and Harry W. Huttig, president of the cemetery company, and further declares a conspiracy was planned so that the bank would lose if the purchase deal fell through. The bill charges that \$134,250 was borrowed from the national bank and given to the former owners of the cemetery property as a first payment. To hold the majority stock purchased on the installment plan, the bill recites that the Cemetery Securities Co. was formed by five members of the Munday ring. The trust agreement by which the stock was purchased was transferred to this company. In the event that the clique was un-

able to make good on the deal, the Niblack bill declares, it was intended to make the bank suffer the loss. It is also reported that unless Henry W. Huttig, Charles B. Munday and others of the Rosehill Cemetery Co. syndicate raise \$25,000 by February 1 they will forfeit all right to the majority of the stock which they purchased two years ago on partial payments.

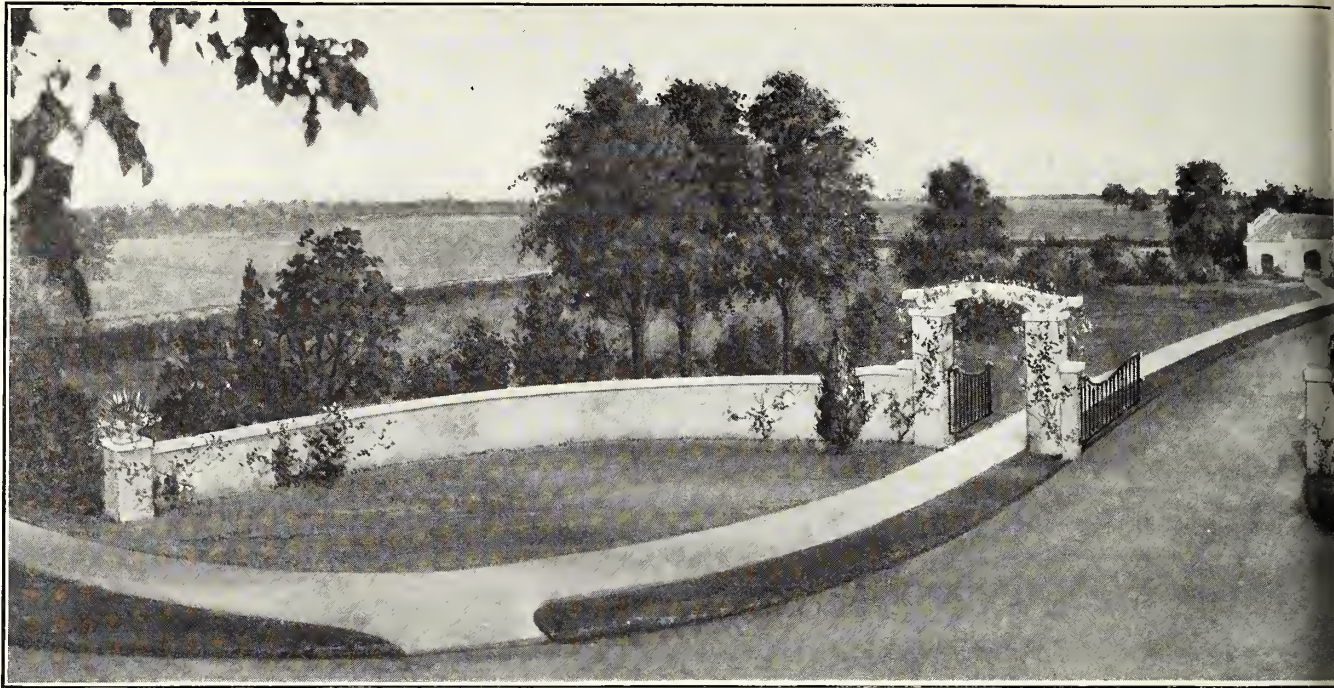
If the principal payment is not made by February 1 they are automatically closed out of the deal whereby they bought 2,668 ⅓ shares, a majority, from V. R. Lansingh, of Brooklyn, and his sisters, Mrs. Grace L. Wiles, of Albany, N. Y., and Mrs. Blanche L. Freeman, of Briggsdale, Colo.

The Rosehill Cemetery Co. is now in the hands of a receiver, the Chicago Title & Trust Co. Superior Judge Foell has issued an order permitting the receiver to issue certificates to the extent of \$50,000 to complete the \$300,000 community mausoleum. This will enable the collection of many contracts made contingent upon the partial or total completion of the mausoleum and permit the contractors to be paid.

NEW BOOKS ON LANDSCAPE WORK.

"Studies of Trees," by J. J. Levison, B. A., M. F., a new book just issued by John Wiley & Sons, New York, is one of the most unique and practical publications of its kind. The book covers the whole range of tree study, including the identification of trees; their nature, habits and growth; insects and diseases which attack them; their grouping and planting; the pruning and care of trees; the identification of commercial woods; the care of the wood lot, and forestry in its many aspects. The discussion of the planting and proper care of trees and of the fundamental principles of forestry, based upon the author's experience of over eight years in the Department of Parks, Brooklyn, N. Y., and in the U. S. forest service, is thoroughly up to date and reliable, and will be found suggestive and usable in the highest degree. It is especially recommended as meeting the needs of farmers and others having the care of estates and woodlands and of students in short or elementary courses in agriculture and forestry. One of the great features of the book is the form in which it is published. The book can be had not only in bound form, but also in separate pamphlets, each pamphlet devoted to a particular study and freely illustrated with halftones. The author is one of the pioneer trained foresters to specialize in the care and planting of ornamental and shade trees and his intimate knowledge of the subject, as well as his understanding of the student's needs, are in accord with his varied experiences as forester for the Brooklyn park system, as lecturer on ornamental and shade trees at Yale University, and as secretary of the American Association of Park Superintendents. The book sells for \$1.60, net, and may be had from John Wiley & Sons, 432 Fourth avenue, New York.

"Design in Landscape Gardening," by Ralph Rodney Root, B. S. A., M. L. A., and Charles Fabens Kelley, A. B., recently published, is designed to fill the need for a book which brings out sharply the underlying principles of design, as applied to landscape. This work surveys carefully the field of landscape architecture, taking into account the difficulties found in average problems and pointing out ways for solving many of them in the several different aspects of the subject. The use of plants in landscape work is thoroughly discussed, leaf color in shrubs is taken up in a new way, and planting schemes showing the application of this theory are a special feature of the book. The book is fully illustrated by photographs, drawings and several plans, showing the working-up of typical problems. It sells for \$2, postpaid, and is published by the Century Co., Union Square, New York City.



COMPLETED ENTRANCE TO HIGHLAND

PLANNING A MODERN SMALL TOWN CEMETERY

The business men of Pittsburg, Kansas, realized that the cemetery problem for their city was one that should be considered and solved at once, as the area set aside for cemetery purposes was far too small to supply the needs of the growing city for more than the next decade.

After a careful study of the cemetery problem in other cities, especially at Joplin, Missouri, they decided that Pittsburg

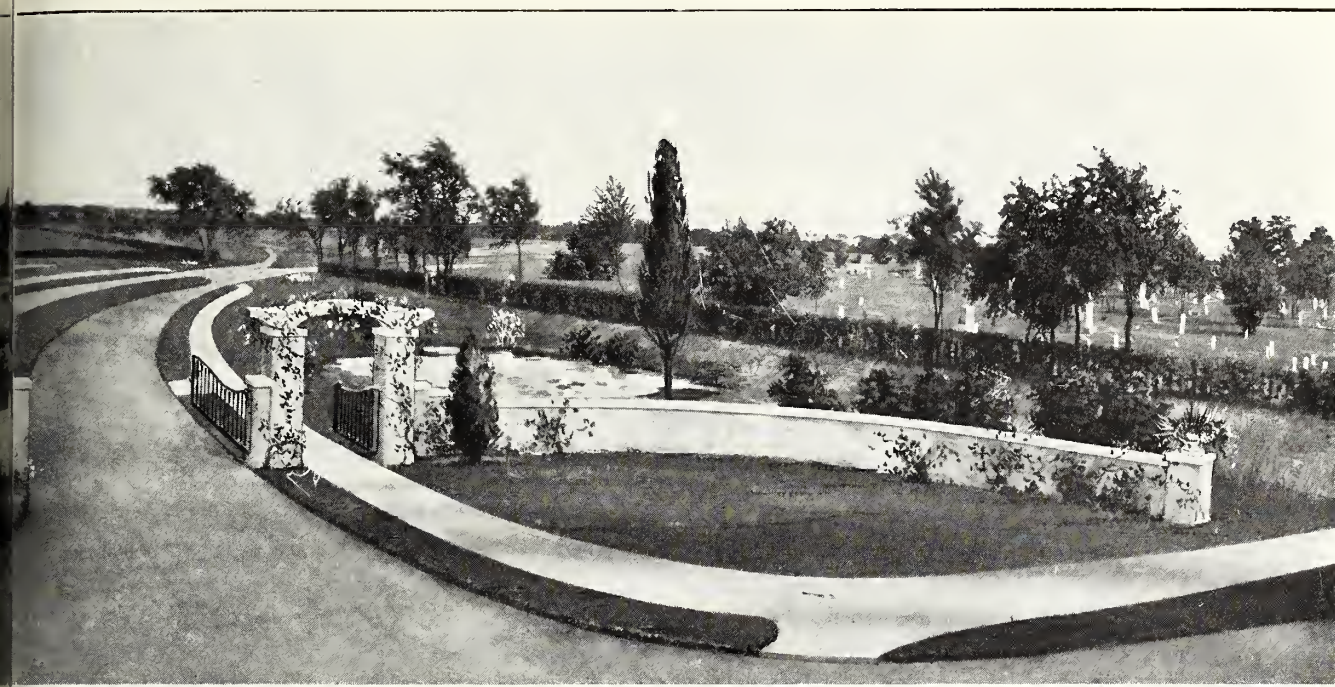
should have the best that money could secure. Mount Hope Cemetery, between Joplin and Webb City, met their approval, and the landscape architects, Hare & Hare of Kansas City, who had selected this ground and had prepared the plans for same, were employed to look over the situation and prepare plans for a cemetery at Pittsburg. They selected a fifty-one acre tract south of the city on Broadway as the

best available ground for cemetery purposes that could be found around Pittsburg. A topographical survey of this ground was made, and road, block and lot plans prepared, along with plans and drawings for entrance, and planting plans for thirty-one acres were completed.

T. N. Campbell, who had so ably executed Mr. Hare's plans at Mount Hope Cemetery, was secured as superintendent



HOBSON CEMETERY WITHOUT PERPETUAL CARE.



PARK CEMETERY, PITTSBURG, KAS.

There was an old neglected cemetery adjoining the land purchased, the Hobson Cemetery, three acres in area. This the company purchased, although it was virtually filled up and no land left to sell. The place was overgrown with weeds and the monuments fallen down or out of order. In six weeks last spring Mr. Campbell transformed this property—regraded the surface and made a beautiful lawn of the old weed and briar patch. He reset many of the monuments and today it comes

into the new property as a part of the modern cemetery that Pittsburg is to be proud of. The changes made are shown by cuts 1 and 2.

The entrance walls, now completed, are of poured concrete, and one hundred and fifty feet across and fifty feet across, facing on Broadway. The height of the wall is four feet and the columns at gateway eight and one-half feet. The double entrance with parked space and flower bed between, is a feature that attracts many of Pittsburg's

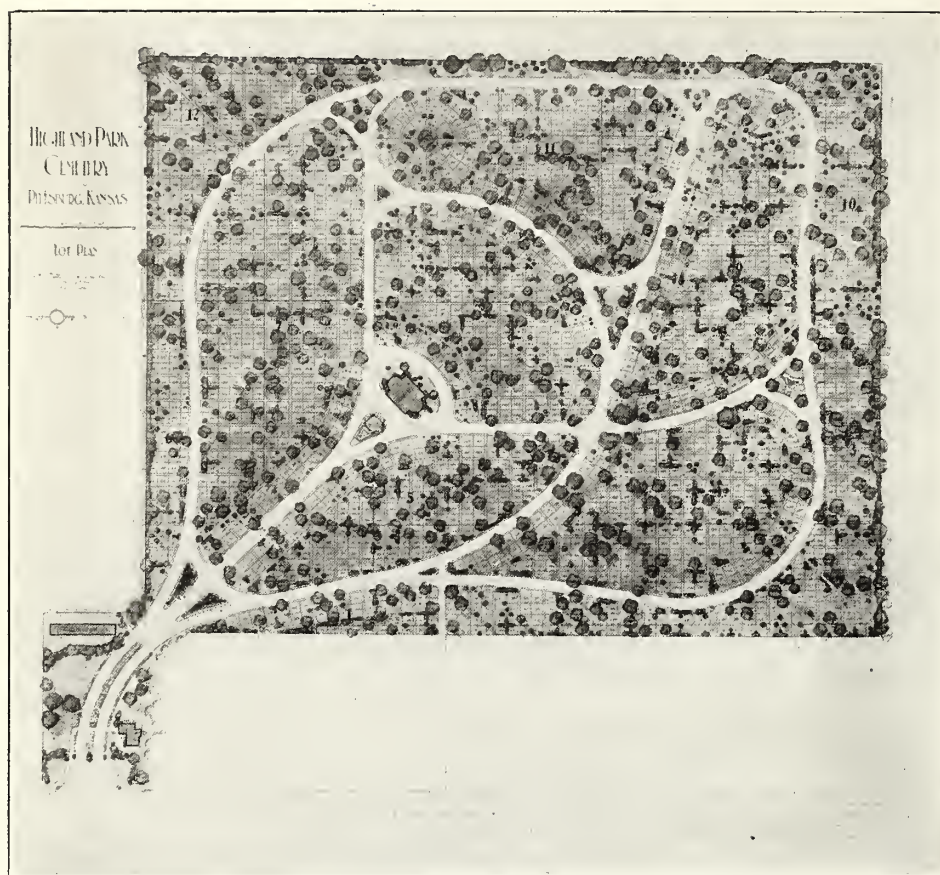
citizens. The plans for the entrance with the planting is after the design prepared by Hare & Hare.

The general plan of the cemetery is shown in the accompanying cut. The roads are macadamized, eighteen feet wide, and have a hard wearing surface of "Joplin grit," a kind of flint from the lead and zinc mines in Joplin. Trees and shrubs for half the ground have just been planted.

The officers of Highland Park Cemetery are: President, O. L. Stamm; Secretary,



SAME SPOT IN HOBSON CEMETERY SIX WEEKS LATER (NOW A PART OF HIGHLAND PARK) SHOWING RESULT OF PERPETUAL CARE.



DRIVES AND PLANTING PLAN OF HIGHLAND PARK CEMETERY.

Edwin E. Coulter; Superintendent, T. N. Campbell; Landscape Architects, Hare & Hare.

The Board of Directors of the association have considered and carefully compared the rules and regulations in force in leading modern cemeteries of the United States, and the aim has been to provide to the greatest possible extent for the preferences of the lot owners, as well as to secure the stability of improvements, the proper methods of burial and the respectful observance of the sacredness of the place.

It is conceded by those of authority on cemeteries that the park-like appearance produced by clean, undulating lawns, broken only by serpentine drives, trees and

shrubs, with the clean-cut lines of the monuments showing against the background of the foliage, is most beautiful and picturesque, and a great improvement over the miscellaneous and cut-up appearance of the old-time graveyards.

A most important feature of Highland Park Cemetery is the perpetual care given to all lots and graves. To insure this a Perpetual Care Fund is being created by placing aside a percentage of the amount received from the sale of lots and single graves, the income from which will be ample to the care of the cemetery after the sale of lots has ceased.

Following are some extracts from the rules governing the cemetery:

All lots shall be held and used in accordance with the By-Laws, Rules and Regulations of the Ceme-

tery now in force or hereafter adopted, and shall not be used for any other purpose than the burial of the human dead.

Lot holders shall not allow interment to be made upon their lots for a compensation; nor shall any transfer or assignment of any lot or interest therein be valid, without the consent of the corporation first had and endorsed upon such transfer or assignment, and entered on record by the secretary.

The corners of each lot will be permanently marked by the Association.

No lot or parcel of ground shall be defined by any so-called fence, railing, coping, hedge, embankment or ditch, or contain any vase, seat, wire-work, rock-work, or other architectural object, except as hereinafter specified.

No lot or grave shall be decorated by its owner, or others interested therein, with any tree, shrub, flower or plant, or the trees or shrubs disturbed in any way without first obtaining the consent of the superintendent. This does not, however, include the placing of cut flowers on the graves.

Mounds over graves shall not exceed two and one-half inches in height when thoroughly settled.

No lot shall be filled above the established grade.

No advertisement of any form will be permitted in the cemetery.

The company reserves the right to remove from any lot anything that conflicts with the Rules and Regulations.

The superintendent has entire charge of the cemetery, and is authorized to enforce all rules, to maintain order, to overlook all workmen, visitors and drivers, to expel those who disregard his orders, to inspect and refuse entrance to any or all materials when necessary, and to insist on the immediate removal of all trash and building material as soon as buildings are completed.

No monument or other structure shall be placed upon any lot until a design of the same with specifications, has been submitted to and accepted, and the location thereof on the lot approved by the superintendent. Only one monument will be permitted on a platted lot and only one head tablet for each grave. All work of whatever nature, except the erection of head tablets and monuments above the foundation of private vaults, shall be done by the employees of the cemetery.

The bases of monuments must rest solidly upon foundations, no wedging being allowed, and be of the same material as the monument.

Tablets marking individual graves, shall not be less than six inches deep and have the upper surface set level with the lawn.

All monuments, grave head tablets or other structures above the surface of the ground, shall be constructed of granite or standard bronze, all other material being prohibited.

No material for monuments, vaults, tombs, or other structures shall remain longer on the ground than is reasonably necessary for the purpose of construction. A place will be designated by the superintendent for the deposit of such material.

Only one marker shall be allowed at a grave; such markers shall not be less than six inches in thickness and shall not exceed twenty-four inches in width for adult graves, nor sixteen inches in width for children's graves. Markers for single graves must be placed at the head of the grave; each marker shall consist of one piece only. Double markers embracing two or more graves will not be allowed.

LANDSCAPE FEATURES AT PANAMA EXPOSITION

In the development and planting of the Panama-Pacific International Exposition grounds landscape gardening has achieved one of its greatest triumphs. To succeed in transforming a salt marsh used as a city's dumping ground into a fairyland of tropical beauty within a year's time is an achievement of which the landscape engineers of the exposition feel a just pride.

John McLaren, Superintendent of San Francisco Parks, was appointed landscape engineer of the exposition, when the site was first selected, and given carte blanche

to treat the 635 acre strip in any manner that he might deem advisable.

It was first necessary to raise the ground above the level of the Bay of San Francisco, and in order to accomplish this 3,100,000 cubic yards of sand were hydraulically pumped on to it.

Then arose the question of how to procure good soil, that would do for a base for the gardens of the exposition. The United States government finally granted permission to McLaren to dredge the Sacramento river at Collinsville, a point sev-

enty miles away from San Francisco, and to transport the rich river-bottom mud to the exposition ground on barges.

This was spread to a depth of from six to eight inches over the entire space and in comparatively deep holes wherever trees were to be planted.

Noted horticulturists in all parts of the world were communicated with, and asked to send the best specimens of plants of the various countries, with the result that there are now several millions of flowering plants on the exposition grounds rep-

representing the handsomest varieties of the world.

Expert gardeners were sent to Australia, India, Africa, the Philippine Islands and Central and South America, and instructed to select the handsomest trees obtainable for exterior decoration.

As many of those chosen were hundreds of years old, to transport and replant them successfully necessitated the use of a modification of the side-box system. For the benefit of those who are not familiar with this process a moment's digression, for the purpose of explanation, may be permissible.

After marking out the tree desired, a huge knife blade, seven feet in length, is first passed around the four sides of the tree, making a rectangular cut some distance from the base, and seven feet in depth. Rich fertilizer is then forced down the cuts, and on the outer side of this boards are passed. As the side-roots have been severed the tree must depend for a time upon its bottom-roots for nourishment, until the wounded and shortened ends of the side-roots are trained to draw from the fertilizer. This usually requires six months. At the expiration of that period the tree is again in good health, and a slideway is cut down one side, the bottom-roots being severed, and a bottom board added to the others, thus forming a large box.

In this manner thousands of trees were treated, and transported by steamship from the farthest corners of the earth to the exposition, where they have been successfully replanted on the grounds. Included among these are hundreds of rare palms, two hundred of which cost \$100 each.



TRANSPLANTING PALMS FOR EXPOSITION GARDENS.

A definite color scheme entered into the plans of Mr. McLaren.

Under the direction—in this particular—of Jules Guerin, the exposition's Master of Color, the color of every plant available, and its tone-effect upon the exposition in general, was taken into consideration.

All of the exteriors of the buildings of the exposition were treated with an excellent imitation of the old Travertine marble, of which so many of the buildings of ancient Rome were constructed. This is a soft-grayish-pink in tone, and naturally many colors would conflict with those tints; so a plan of elimination of some of the flowering plants was necessary.

By a system of rotation, there will never

be a minute during the ten months' life of the exposition, when all flowering plants exposed to view will not be in full bloom. The millions of plants on hand have been divided into three classes: early blooming, summer blooming, and autumn blooming.

Each of these classes has been carefully numbered and subdivided into two portions, one of which will be planted when the time for the class to commence blooming arrives, and the other half held in reserve. When any single plant shows signs of ceasing to bloom, it will be replaced by a duplicate from the reserve section in the nurseries. When the entire class is finished blooming, it will be replaced by the second and third divisions, each in turn.

THE COLUMBARIUM OF THE FUTURE

An address before the National Cremation Association, by S. F. Balcom.

The return of cremation, and its being put into use by civilization after the lapse of centuries, is due to two things mainly: First, the perfection in the last generation or two of hot-air furnaces or retorts that incinerate without the great conflagration that attended the funeral pyre of the Greeks and Romans of old; and, second, to the fact that modern thought is laying aside old customs as well as prejudices, and that the people of today are open to conviction and, more and more, are coming to stand for those things that best serve their day and generation. In the case of inhumation, which extends all the way from where several persons must be interred in the same grave, as in some crowded cemeteries, on through to the ample spaces allotted when ample funds are in command, and to the exclusive interments in the vaults of private mausoleums, the process of return to nature is slow to the utmost degree. With incineration, this transforma-

tion is brought about in a short time and the ashes remain for disposition as per some former provision of our own or subject to a selection at the time by those nearest to us. The question then comes, shall the remains be placed in a metal receptacle and stored in a receiving vault, or deposited permanently in a columbarium where special provision has been made for such care, or, if sufficient means are at hand, shall they be placed in an urn of artistic workmanship and set in a niche in a large and elegant columbarium? That some have decided to scatter the ashes on the ocean waves, and others to scatter them over a family lot in the cemetery, or to bury them in a grave of a relative, proves that the problem has not as yet been satisfactorily solved. This lack of a definite and satisfactory method is thought to have been one reason for the practice of cremation not having been more generally accepted, and it is with a hope that a method may

be had whereby permanent provision may be made for the remains and a fit and lasting memorial provided, that the following practice is suggested.

To begin with, a simple method, so inexpensive that almost any family could take advantage of it, would be to build a concrete foundation for a family monument, and in this foundation provide some rectangular receptacles in which, from time to time, the ashes can be placed and sealed up and an inscription placed on the monument. This could be repeated on a larger scale until an amount were spent equal to that found in the very large and elaborate works of art in the larger city cemeteries. In all of which receptacles could be provided in the foundation, or in the base, or in the massive portions of the structure. Bronze lettering as well as relief art panels and memorial tablets are coming very greatly into use in connection with large sections of granite and marble, and recep-

tacles in the rear of these bronze castings could very appropriately be provided.

In the application of landscape work to cemeteries in America the idea has been to produce a park-like appearance in which

mausoleums now in use, a space of ground could accompany same that would give opportunity for individual treatment; and in the cases of very large columbariums, as with crematoriums and chapels, the grounds

for such an association would be on a scale equal in magnitude to an Egyptian temple, of which Robert Hichens says: "The tremendous effect these temples have upon the soul is not that jeweled dimness one loves

	1896 to 1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Total
LeMay Cemetery	Washington, Pennsylvania	13	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	40
Lancaster Cemetery	Lancaster, Pennsylvania	10	11	3	1	3	1	4	2	1	3	0	4	2	2	3	0	1	..	..	94
Buffalo Cremation Co.	Buffalo, New York	3	35	10	11	3	1	3	1	4	2	1	3	0	4	2	2	3	0	1	143
S. Cremation Co.	New York, New York	9	77	67	83	106	187	186	232	243	265	330	331	406	528	602	654	617	720	841	1,433
Pittsburgh Crematory, Inc.	Pittsburgh, Pennsylvania	14	9	11	8	24	21	33	47	22	31	29	44	42	36	34	39	52	61	62	678
Michigan Cremation Association	Detroit, Michigan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,174
Rosedale Crematory	Los Angeles, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,352
Cincinnati Cremation Co.	Cincinnati, Ohio	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,575
Missouri Cremation Association	St. Louis, Missouri	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,650
Chelton Hills Crematory	Philadelphia, Pennsylvania	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,833
Swingburne Island Crematory	New York, New York	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Lander-Earl Memorial Crematory	Troy, New York	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Davenport Cremation Association	Davenport, Iowa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Waterville Cemetery Association	Waterville, New York	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Graceland Crematory	Chicago, Illinois	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Cypress Lawn Crematory	San Francisco, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Massachusetts Cremation Society	Boston, Massachusetts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Passadena Crematory	Passadena, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Old Fellows Cemetery	San Francisco, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Forest Home Cemetery	Milwaukee, Wisconsin	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
J. William Lee	Washington, District Columbia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Lindenwood Crematory	Fl. Wayne, Indiana	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Forest Cemetery Cremation Association	St. Paul, Minnesota	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Mt. Auburn Crematory	Cambridge, Massachusetts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Evergreen Cemetery	Los Angeles, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Cleveland Cremation Co.	Cleveland, Ohio	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Portland Cremation Association	Portland, Oregon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Oakland Cremation Association	Oakland, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Springfield Crematory, Limited	Montreal, Canada	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Denver Crematory	Denver, Colorado	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Cremation Society of Washington	Seattle, Washington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Indianapolis Crematory	Indianapolis, Indiana	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Los Angeles Crematory Association	Los Angeles, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Louder Park Cemetery	Chicago, Illinois	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Rosell Crematory	Linden, New Jersey	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Oahu Crematory Association	Honolulu, Hawaii	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Cremation Society of Tacoma	Tacoma, Washington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Montrose Crematory	Chicago, Illinois	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
N. Y. & N. J. Cremation Co.	North Bergen, New Jersey	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Oakwood Crematory	Chicago, Illinois	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Public Crematorium	Washington, District Columbia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Lakewood Crematory	Minneapolis, Minnesota	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
East Lawn Crematory	Sacramento, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Springfield Crematory	Springfield, Massachusetts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Mountain View Crematory	Sacramento, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Allegheny County Crematory	Pittsburgh, Pennsylvania	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
California Crematorium	Oakland, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Butterworth & Son	Seattle, Washington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Vancouver Crematory	Vancouver, British Columbia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Mt. Olivet Cemetery Association	San Francisco, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Mt. Hope Cemetery Crematorium	Rochester, New York	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Bonner-Watson Co.	Seattle, Washington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Forest Lawn Cemetery	Omaha, Nebraska	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Woodmere Crematory	Detroit, Michigan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Connecticut Hospital	Middletown, Connecticut	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
E. J. Herman	Pittsburgh, Pennsylvania	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
U. S. Crematory	Ancon, Panama	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Fresno Crematory	Fresno, California	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Bohemian Nat'l Cemetery Crematory	Chicago, Illinois	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,580
Total		28	58	110	127	187	239	368	459	547	644	800	1005	1084	1371	1668	1976	2363	2713	3300	3532

* No report for these years. ** Closed.

TABLE OF CREMATIONS IN AMERICA COMPILED FOR THE CREMATION ASSOCIATION OF AMERICA BY E. P. SAMPSON OF PITTSBURG.

the monuments do not figure as a governing factor; they come in incidentally, as best they can, and appear to be treated more as a necessary evil than as the one important thing for which the cemetery exists. In Germany the landscape work is made to conform more to the needs of the lot owners. It decorates and makes a most satisfactory setting or background for the individual monuments, whether they be simple grave-stones or expensive designs. If a cemetery were designed with a view of simply providing for the stone memorials, as would be the case where none but cremated remains were provided for, the monuments could be set in large or small clumps of trees or shrubbery, and when desired set continuously in an unbroken line or border of plants, shrubs and trees. Not that the monuments would stand like a row of sentinels, but placed in diversified niches in the shrubbery. In this case, where the burial space for graves would not have to be considered, the American or German plans of landscape treatment could be combined and would give as a result a much more generous use of landscape planting. The combinations of plants, shrubs and trees are infinite, and when cared for produce a result that is most satisfying. In the case of smaller columbariums, which would correspond with family

would be made to conform to the structures and would call for expert landscape treatment, the same as the designs for the structures called for architectural treatment. The use of large columbariums would introduce a comparatively new feature in the disposition of remains, for, sooner or later, fraternal orders as well as religious denominations would erect structures specially for those of their order or association, and local, county and even state provision would be made by erecting appropriate buildings. This would result in those who now bury in single graves selecting a receptacle in a large community columbarium, if there had not already been provision made in the way of a family repository. In this way the smaller lots and inferior stone monuments would rapidly lessen in number, and the remarkable specimens of art in the way of statues and monuments that have in the last few years come to grace the grounds of the larger city cemeteries would increase until a memorial park would have many times the beauty and attractiveness of the modern cemetery.

From an association that is state-wide and which would make provision for the last resting place of its associates it is but a step to one that is nation-wide and gathers its associates from all directions within its bounds. A national columbarium

in Gothic cathedrals, but the heavy dimness of windowless, mighty chambers lighted only by a relicked daylight ever trying to steal in."

A fit setting for such a building would be upon a mountain top among the clouds, with an environment of Nature that would lift in above and away from the cares of life and place it in a realm of its own. Such a location could be had to perfection in the Blue Ridge mountains and within sight of the historic James River. It would be at about the center of population east of the Rocky Mountains. Within, it could be finished in any degree of elegance desired, and with corridors and colonnades grand beyond description. In the way of memorials, there could be, in addition to bronze and marble memorial urns, tablets and sculpture of infinite design; a building—similar to the inner temple of an Egyptian temple—in which could be maintained a memorial scriptorium with a most complete collection of biographical works, for the study of members and reference by visitors, adding a live and interesting feature that is not found in memorial buildings. In this building, or in the lack of such a building, in an apartment of the memorial building, could be maintained a department of written, printed or hand-made personal memorials

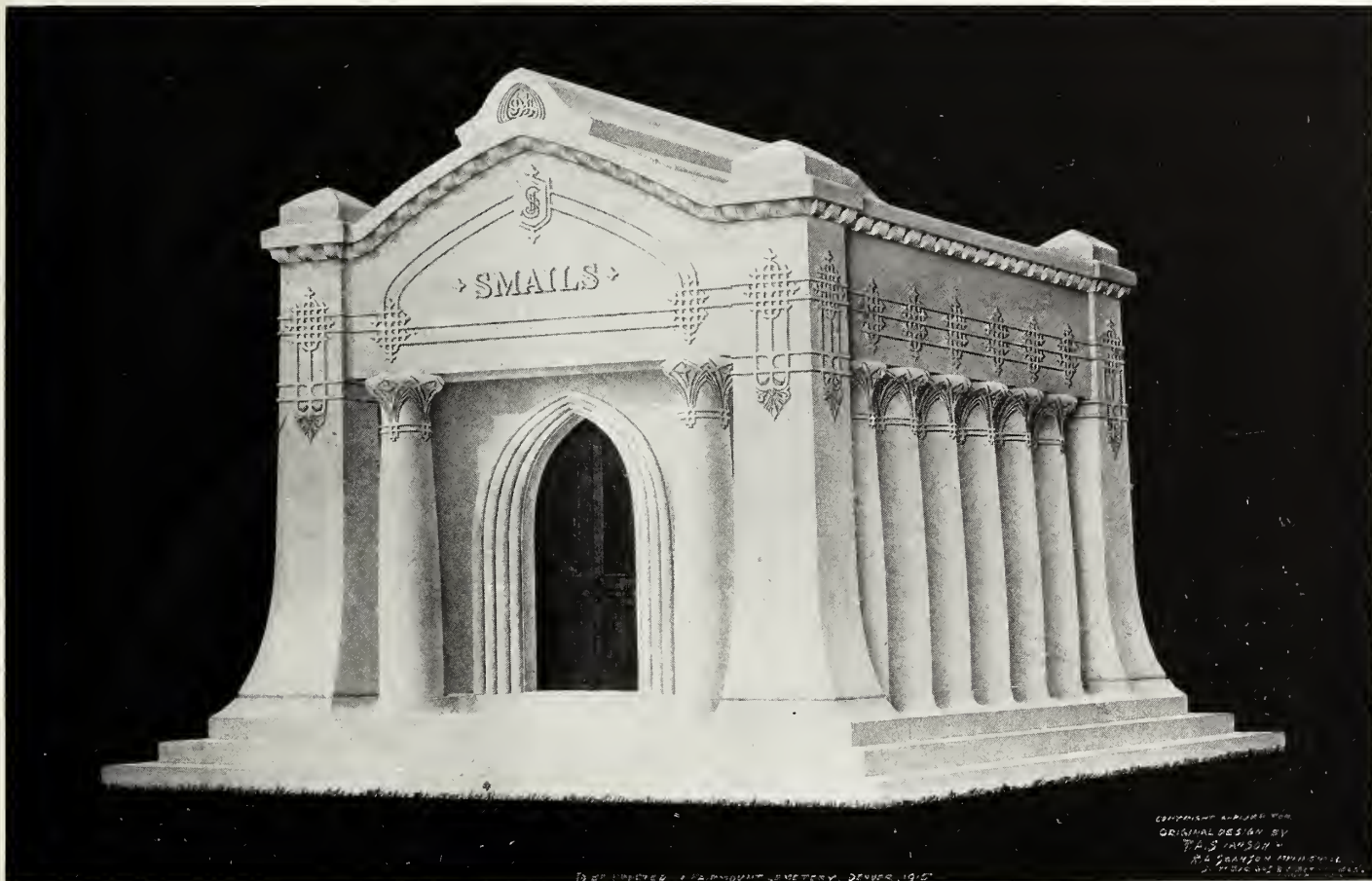
A MAUSOLEUM OF RARELY ORIGINAL DESIGN

One of the most interesting specimens of monumental architecture in this country that is now being executed for Fairmount Cemetery, Denver, and is expected to be completed at some time this season, is the Smails mausoleum. Fairmount Cemetery has some of the finest monuments to be seen in any American cemetery, and

ever been developed in this country. It is a composite design, with suggestions of Egyptian, art nouveau, and other architectural styles that have been so skillfully wrought into a unified, dignified and beautiful specimen of architecture as to make this structure the most interesting mausoleum of recent years. There have been

eighteen columns, 9-6 high, 2-0 at base, with caps 2-4 each cut in one piece. Inside will be six columns 9-6 high, 1-6 at the base and 1-10 at the cap.

The floor will be of polished Barre granite and there will be two sarcophagii, each cut in one piece. An art glass window will contain the Smails escutcheon and the



SMAILS MAUSOLEUM, NOW BEING ERECTED IN DENVER, COL.
AN ORIGINAL DESIGN BY RICHARD A. SWANSON, DENVER, COL.

visitors to Denver will find much there to interest them, and nothing more interesting than this fine mausoleum.

There is so seldom anything of real originality in the architecture of modern mausoleums that a really original and distinctive design for a mausoleum is an event of great moment in the history of mortuary architecture.

Our best mausoleums, while they are beautifully designed, well proportioned and built with all the skill that modern construction knows, are seldom any more than endless repetitions of the copies of Greek temples. As far as exterior design is concerned, there is practically very little essential difference in their appearance, except in the size, the arrangement of the columns, or the massiveness of the stones.

We show on this page one of the most original designs for a mausoleum that has

larger and costlier works, but few in this country of such individual distinctive design.

This work is the design of Richard A. Swanson, of Denver, and is to be erected in that city by the R. A. Swanson Monumental Co. as a memorial to the late John DeWitt Smails.

The contract was given by Mrs. Smails on a basis of design, after a careful consideration of plans by some of the leading mausoleum builders of the country, and is to cost \$45,000.

The structure is to be as massive and thorough in construction as it is beautiful, and will, it is said, be the largest mausoleum in the West.

It will be 25-10 wide by 30-6 long by 21-2 high and will be of Barre granite throughout, both exterior and interior. The chief decorative feature of the exterior will be

army record of Mr. Smails, and the ceiling will be paneled and beamed.

The granite work will be all twelve-cut, exterior and interior, except the polished floor, and memorial tablets which are also to be polished.

The top stylobate or C course is in four pieces only; in fact, the entire structure is built as heavy and in as few pieces as possible. There are but ninety pieces in the exterior and forty-one in the interior. The paramount idea was massive construction. It is to stand on the largest and most beautiful lot in Fairmount Cemetery, Denver, on a knoll adjoining the main entrance to the cemetery.

The work is now being cut for Mr. Swanson by Marr & Gordon, of Barre, Vt. It will contain about twenty-two carloads of finished Barre granite, besides the Colorado granite to be used in the foundations.

NEW METHOD of PLANTING IVY and MYRTLE GRAVES

How Ivy and Myrtle Are Transplanted from Nursery to Grave in

Boxes, by Forrest McCoy, Lake View Cemetery, Cleveland, O.

Transplanting ivy and myrtle graves in boxes from the nursery to the grave was adopted by us for two reasons:

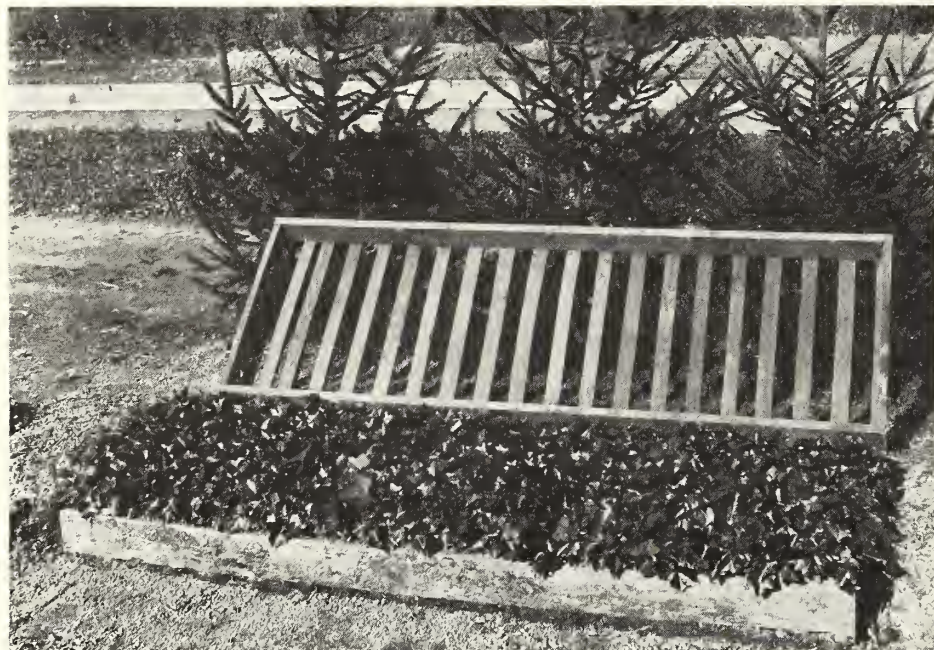
planting each plant separately and have it show a healthy growth. In the new method, the ivy or myrtle is kept in con-

These boxes are made of white oak, the standard size measuring six feet four inches long, two feet one inch wide and four inches deep. The boxes may vary in size according to grave. You will see by the accompanying photograph that the bottom of the box is of slats. These are two inches wide, one inch thick and two inches apart. We use no preservative on the boxes.

Before planting the vines, the boxes are buried two inches below the surface of the ground in the nursery, from that time on the plants are given the usual care to keep them in good shape.

When an order comes from the office for an ivy or myrtle grave the planted box is lifted from the ground, placed in the proper cart to be carried to the grave, which has been prepared in the following manner: The outside measurements of the box having been noted, a trench is dug over the grave, allowing just room enough for the box to slip in and deep enough to have the box about one and a half to two inches below the surface of the lawn. The edge of the box is then covered with sod and the grave is ready for inspection.

The photograph herewith shows the box before planting and one that has just been lifted from the nursery bed preparatory to removal to a grave.



METHOD OF TRANSPLANTING IVY AND MYRTLE AT LAKE VIEW.

First: In the hotter months of the year it is next to impossible to plant a grave of ivy and myrtle by the old method of trans-

planting and when transplanted it has the appearance of having been growing on the grave for a number of months.

TWO FINE PARK MEMORIAL FOUNTAINS

One of the most beautiful fountain memorials in the country, and one of the most attractive public memorials in Washington, is the memorial fountain lately placed near the White House grounds in memory of Major Archibald W. Butt, United States Army, and Francis D. Millet, artist, heroes of the Titanic disaster.

Its simple, graceful lines, chaste proportions and delicately sculptured reliefs make it a rarely appropriate tribute to two of those most honored in the records of the Titanic wreck. It is doubly a tribute in that both the sculptor, Daniel Chester French, and the architect, Thomas Hastings, of Carrere & Hastings, gave their work free of cost to the memorial.

The memorial is a severely simple architectural composition with two delicate low reliefs symbolizing the lives of the two men commemorated.

One of the reliefs represents "Painting," and the other a knight in armor,

as suggesting Major Butt's profession of arms. They are each four feet in height, from which the approximate dimensions of the fountain may be judged. The material of the fountain is Knoxville marble. The fountain is placed just outside the White House grounds, in the park between the White House grounds and the Washington monument, which may be discerned, faintly outlined in the background of our illustration. It is nearly surrounded by shrubbery. Piccirilli Brothers executed the stonework.

The monument to de Musset, executed by Moncel, takes the form of a monumental fountain in the garden of the Grand Palais in Paris, a few paces to the right of the south entrance to this building.

The monumental group, done in marble, represents the poet de Musset surrounded by figures in both high and low relief of the various important characters in his works.

Moncel has given in rather realistic

style a clever arrangement to these figures. Those near the foreground are executed in the round, while those in the middle distance and on the horizon, as it were, are in low relief and practically melt and incorporate themselves in the flat marble.

At the left center of the arrangement, in the foreground, sits de Musset, lost in reverie, a splendid figure, both as to pose, spirit and execution.

Surrounding this monumental fountain are some antique columns forming a note, so the group is not crowded directly against a hard background of tree trunks and shrubs, but is first relieved by the semi-severeness of these architectural forms.

In the foreground is a pool supplied by a stream that flows from the rugged base of the monument. In the summer this pool is filled with white lilies, which repeat the softness of the white marble in the water.



BUTT-MILLET MEMORIAL TO TITANIC HEROES, WASHINGTON, D. C.



DE MUSSET MEMORIAL GARDEN OF GRAND PALAIS, PARIS.

PARK NEWS.

The twenty-first annual report of the Board of Park Commissioners of Cambridge, Mass., sets forth some very interesting facts about the work accomplished during the year of 1914 and proposed improvements. Among them, plans for a shelter with proper sanitary arrangements will be drawn for Thorndike Field, the most popular of the city playgrounds, and Section E. of Charles River Parkway, connecting Western avenue and River street, will be completed, aside from providing other proper roadways. Much work was done on the browntail and gypsy moths and the elm-leaf beetle exterminator, and many private estates were cleaned of these pests during the winter months. About 5,448 street trees were cleaned. Up to the last year the commission had these moths well under control, but during the time they were in flight, in July, a greater number of the browntail moths came to Cambridge from the neighboring towns, and consequently the expense of doing the moth work this year was almost 50 per cent larger than it ordinarily is. Under the direction of Professor Sargent, of the Arnold Arboretum, all the dead wood in the large cavity on the north side of the historic tree, Washington elm, was removed and sprayed. A similar treatment was administered about sixteen years ago.

The season's work on the parks and parkway system of St. Paul, Minn., consisted mainly of upkeep work, as shown by the report of the Board of Park Commissioners for 1913. However, the grading of one-half mile of lake shore drive was accomplished in Phalen Park, and fifty canoes placed on Lake Phalen and Lake Como, aside from erecting a sheltered canoe dock at Lake Phalen. Many of the city playgrounds were improved, bathing facilities established in Phalen Park and band concerts given during the summer.

Among the work accomplished by the Bureau of Parks, of Portland, Ore., for the year 1913 is the paving, drainage and lighting of 6,000 feet and the grading of 8,000 feet of the Hillside Parkway, grading of drives, remodeling of house and the planting of shrubs at Mt. Tabor; the completion of the recreation building at Peninsula and of the comfort station at Sixth and Yamhill streets. Playground work also increased and several new sets of apparatus were installed.

Olmsted Brothers, landscape architects, of Brookline, Mass., recently issued a report on their proposed park system for Dayton, O. This describes in detail the theoretical arrangement of parks, boulevards, playgrounds, etc., for that city, taking advantage of whatever characteris-

est and beauty there may be. A copy of this book may be had on application to D. F. Garland, Director of Public Welfare, Dayton, Ohio.

New Parks and Improvements.

The shelter buildings and other permanent improvements at Summit Play Park, Dallas, Tex., are nearing completion and the park is expected to be opened to the public by February 1. The Park Board recently completed the purchase of another tract of land for Exall Park. A lot 50x250 feet, facing on Live Oak street, was bought from M. E. McCarty for the sum of \$4,500. A plan for extending City Park from its present southern limits at Gano street to Grand avenue, thus making it a mile long, has been suggested by City Engineer J. M. Preston. The plan also includes a proposition to purchase a strip 500 feet wide, taking in both banks of Mill Creek from City Park to Commerce street at Duncan or Walton.

Members of the special parks commission, Chicago, Ill., in an appearance before the council committee on finance, asked that a proposal to approve a \$1,000,000 bond issue for new small parks, playgrounds and bathing beaches be placed on the little ballot at the April election.

Frederick W. Leistikow, of Winnipeg, Man., has donated \$5,000 to the city of Grafton, N. D., for the purchase of a park site. This is to be established as a memorial to his parents, former residents of this city, and is to be called Leistikow Memorial Park.

The prospective park near the Detroit, Grand Haven & Milwaukee depot at Fenton, Mich., is still under discussion. The latest development is that the railroad company has offered to fill in and grade the hollow near the depot, providing Fenton would pay for the landscape gardening and see that the park, when completed, is kept in order.

To commemorate the three Cushing brothers, war heroes, a memorial is being erected in Cushing Memorial Park, recently established to their memory. The park is situated at the site of their old home near Delafield, Wis., on a rise of ground which gives a commanding view of the country around. The park is to be surrounded with an iron fence and further developed by the construction of driveways, walks, and the planting of trees and shrubs. E. H. Niles, of the White Elm Nursery Co., Oconomowoc, Wis., laid the plans for the landscape effects. The work is being done by popular subscriptions and \$5,000 appropriated by the state of Wisconsin.

C. C. and W. G. Gittings, of Racine, Wis., have presented to the city fifteen acres of land for additional park purposes.

A. A. Fisk, superintendent of the Board of Park Commissioners, of Racine, Wis., writes to correct an article that appeared in this department last month about the Park Board budget of that city. Mr. Fisk writes as follows: "It is true that our budget was cut down a good deal, but notwithstanding this fact we are going to do a lot more work besides paying the salaries of park employees. It undoubtedly would be a source of information to know that Racine perhaps has more recreative facilities in its park system than any other city of its size in the United States. This is a pretty broad statement, but I think the same could be thoroughly proven."

CEMETERY NOTES

The annual report for Mt. Elliot and Mt. Olivet cemeteries, Detroit Mich., for the year ending October 1, 1914, shows a total income from all sources of \$85,029.35. Of this amount \$43,196.23 was for lots and single graves in Mt. Olivet, the new Catholic cemetery in course of development. The average monthly interments are 250 at Mt. Olivet and 50 at Mt. Elliot. The total cash and invested funds of the cemeteries aggregate \$96,038.38. The old cemetery is practically filled except for the lots that are vacated from time to time by removals to Mt. Olivet.

At a recent meeting of the Linwood Cemetery Association, of Pana, Ill., the following officers were elected: President, Mrs. A. B. Corman; vice-president, Mrs.

Rudolph Schweitzka; secretary, Mrs. Lee Robb; treasurer, Miss Janet McCoy; corresponding secretary, Miss Ida Mull.

The construction of a community mausoleum proposed by the New York Community Mausoleum Co., near the entrance to Ocean View Cemetery (Staten Island), N. Y., has received much opposition, headed by Cornelius J. Kolff, secretary of the Staten Island Chamber of Commerce.

At a meeting of the Pinewood Cemetery Association, of Daytona, Fla., recently, the following officers were elected: Colonel C. M. Bingham, president; W. F. Bleekman, vice-president; A. K. Brokaw, treasurer, and Mrs. W. W. Carter, secretary. Mrs. Wilson Allen, manager, and Dr. S. P. Le-land and Laurence Thompson, directors.



COLORADO-YULE MARBLE

is not only the most beautiful material in the world for the adornment of a cemetery, but it can be produced in any size or quantity.

The accompanying photographs illustrate the rough blocks ready for finishing into mammoth pieces for the \$2,000,000 Lincoln Memorial at Washington, D. C.



COLORADO-YULE MARBLE CO.

Quarries, Marble, Colo. : Chicago Office, 462 Insurance Exchange Bldg.

Captain Wilson, superintendent of the National Cemetery in Mobile, Ala., for the past five years, has been transferred to Marietta, Ga., and J. B. Erion was elected by Mobile Post No. 2, G. A. R., as his successor.

The Supreme Court recently handed down an opinion confirming the judgment of the County Court in the case of the Bloomington Cemetery Association vs. P. M. Stubblefield, county collector, of Bloomington, Ill., that the cemetery must pay taxes for sewer.

At the annual meeting of the St. Vincent's Cemetery Association, of La Salle, Ill., it was decided to plant 100 more trees in the cemetery, and the organization is considering the advisability of planting a hedge about the grounds.

The biggest judgment ever recorded in the state courts was given by Common Pleas Judge Gorman in Cincinnati, O., recently, for \$200,946.40 to the Glendale Cemetery Co. against Charles F. Heinig, who promoted the cemetery company in 1909. Early in 1909 Heinig established himself as a promoter and interested a number of persons in the establishment of the Glendale Cemetery. He represented that he had purchased 160 acres of land from the Cochran family for \$149,960, and induced the company to take the land, he taking stock of that face value in payment of \$22,000 of bonds for his services. Two years later the company discovered that Heinig had merely an option to buy the property. The judgment is for unpaid subscription on the stock Heinig took, with interest. The stock and bonds taken by Heinig are subject to the judgment. Their value depends on the value of the company, which consists of its 31-acre cemetery at Glendale. The company recently made an assignment.

The Carbo Steel Post Co., of Chicago, is sending out a very interesting book describing and illustrating in detail the various unique constructional features of the Carbo steel posts and explaining various forms of tests for fence posts. It illustrates graphically many interesting points in fence construction.

New Cemeteries and Improvements.

The city of Selma, Ala., is planning to build across Valley Creek, at the foot of Dallas street, a bridge by which the city would acquire a large tract of land just west of the cemetery.

A new cemetery, to be opened in the spring, was recently incorporated at Columbus, O., by J. H. Van Fossen, E. L. Rickets, B. C. Fletcher, J. J. Edgar and T. H. Fletcher, with a capital stock of \$75,000. The name of the cemetery will be Woodland Park.

Under the direction of Captain E. L. Ford, superintendent of the Milford Cemetery, Milford, Conn., the property recently purchased by the Milford Cemetery

Association is being cleaned up and otherwise improved.

The Jordon Cemetery Corporation was recently incorporated at Waterford, Mass., with a capital of \$10,000 by John I. Chappell, Nellie Chappell Rose and Frank B. Rose.

The Riverside Park Cemetery Association, of Spokane, Wash., will soon start development work on its 69-acre cemetery. The grounds will be laid out by an expert landscape architect and a chapel, crematory and receiving vault are to be built at an estimated cost of \$25,000. The officers of the company are: J. D. Sherwood, president; A. W. Witherspoon, vice-president; A. A. Corey, secretary, and M. B. Connelly, treasurer.

The Hope Cemetery Association, of Salem, O., has purchased about two acres of ground located at the northwest corner of the burial park, which will be fenced and leveled off for lots.

At a recent meeting of the Board of Supervisors of Mineola (L. I.), N. Y., it was suggested by representatives of St. John's Episcopal Church that another acre be added to their cemetery.

The new cemetery movement recently inaugurated at Robinson, Ill., is making rapid progress and in all probability this city will soon have a new burial ground.

A CORRECTION.

On page 304, November issue of *PARK AND CEMETERY* I referred to the silence of Portland, Oregon, as regards repeating the invitation of the year before to us to have our 1915 convention in that city. Under date of Nov. 17 the Secretary wrote me: "You say that we did not get an invitation from Portland. This was sent in due form and turned over to the Location Committee, who did not find very many sponsors for it and did not recommend it."

Under date of Nov. 24 Mr. Theo. E. Anderson, Superintendent of River View Cemetery Association, Portland, Oregon, who presented the invitation, wrote me to the effect that the invitation extended by him to the association at Buffalo last year to have the Cemetery Superintendents' convention meet at Portland next year (1915), was again urged by him this year in a letter to the Secretary under date of Sept. 16; and again in an official way under date of Sept. 30 the invitation was addressed "To the Officers and Members of the Association of American Cemetery Superintendents, Planters' Hotel, St. Louis, Mo.," warmly inviting and strongly urging us to come to Portland in 1915. I have copies of these letters.

These letters are the only information or knowledge I have had that Portland did, this year, repeat its invitation of a year ago. And as this invitation was not read before the association in convention assembled nor submitted to its Phantom Executive Committee, how were the members to know anything about it?

In view of the prominence and publicity given to this invitation a year ago (see page 35 of last year's Proceedings), in justice to Mr. Anderson, who so cordially invited us, and to Portland, and in common courtesy to the members of the Association, I believe Mr. Anderson's official invitation, dated Sept. 30 last, should have been read before the convention at St. Louis, and then referred, with the other invitations, to the Location Committee.

Pittsburgh, Pa. WILLIAM FALCONER.

THE COVER ILLUSTRATION.

The entrance to South Mound Cemetery at New Castle, Ind., is shown on the front cover of this issue. The ornamental iron drive and walk gates, as well as several hundred feet of fence, were made and erected by The Stewart Iron Works Co., Cincinnati, O.

The drive gates are 15 feet 4 inches wide, 7 feet high at hinge sides, tapering gracefully to 4 feet 6 inches at center. Hinge bars are 2 inches square; front bar, 2x5½ inches; cover bar, 1¾x1½ inches. All rails 2x5½ inches, solid; braces, 1¼x1½ inches; long and short pickets, ¾ inch square, with forged points; long pickets spaced approximately 5 inches on centers; scrolls and rings, ¾x¼ inches. Gates are fitted with first-class non-corrosive flat tumbler locks, and hinges have the Stewart patent oiling feature. Walk gates are of the same design as drive gates, 5 feet wide, 7 feet high at hinge side, 4 feet 6 inches high at latch side. Hinge bar, 2x1 inches; front bar, 2x5½ inches; all rails, 2x5½ inches solid; brace, 1¼x1½ inches, securely riveted to pickets; long and short pickets, ¾ inch square, with forged points; long pickets spaced approximately 5 inches on centers; scrolls and rings, ¾x¼ inches. Walk gates are also equipped with first-class non-corrosive flat tumbler locks.

This fine entrance undoubtedly makes a wonderful improvement in the already beautiful South Mound Cemetery and much credit for the splendid condition of this home for the dead is due to the superintendent, John S. Beyer, and other officers and members of the cemetery association.

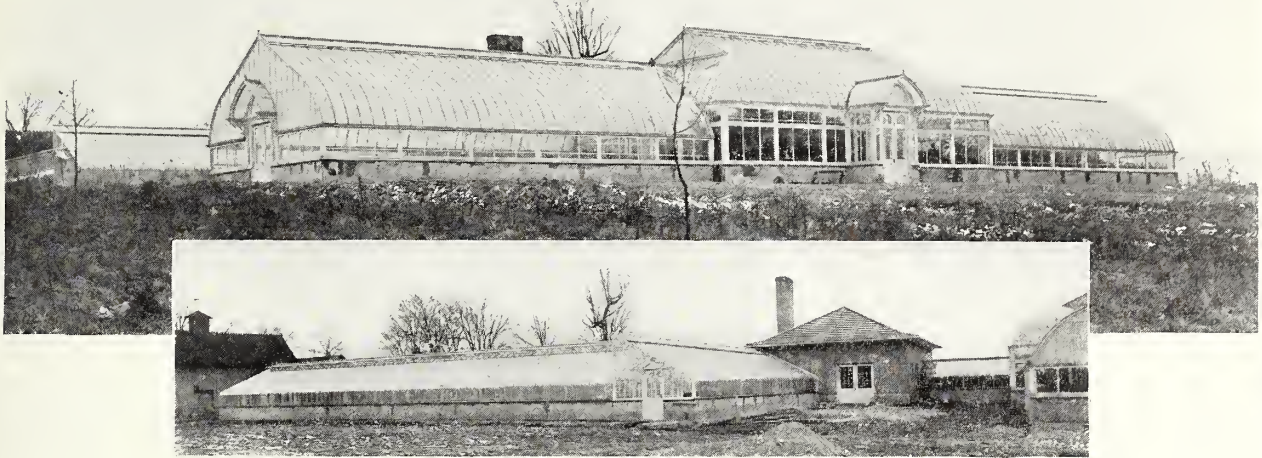
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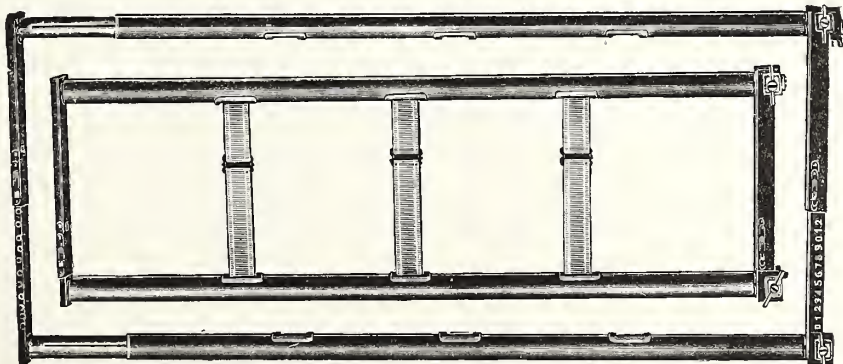
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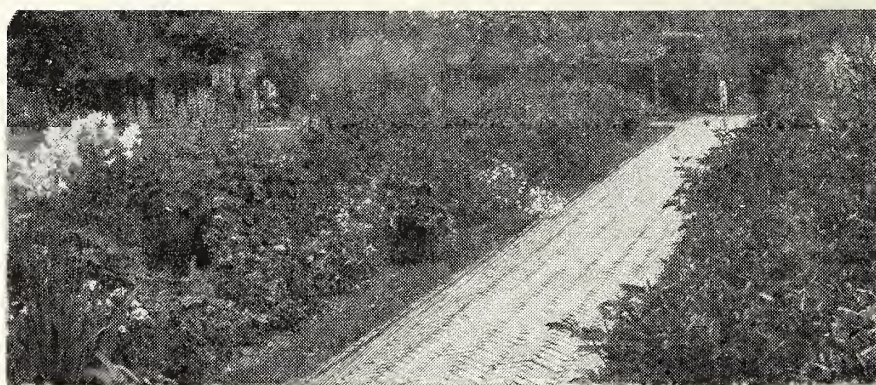


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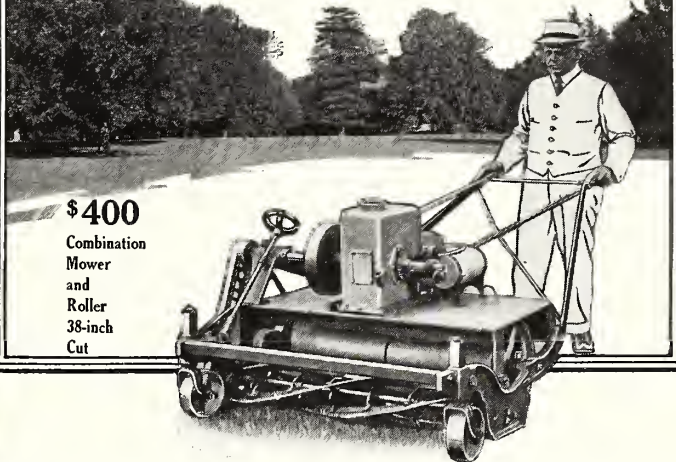
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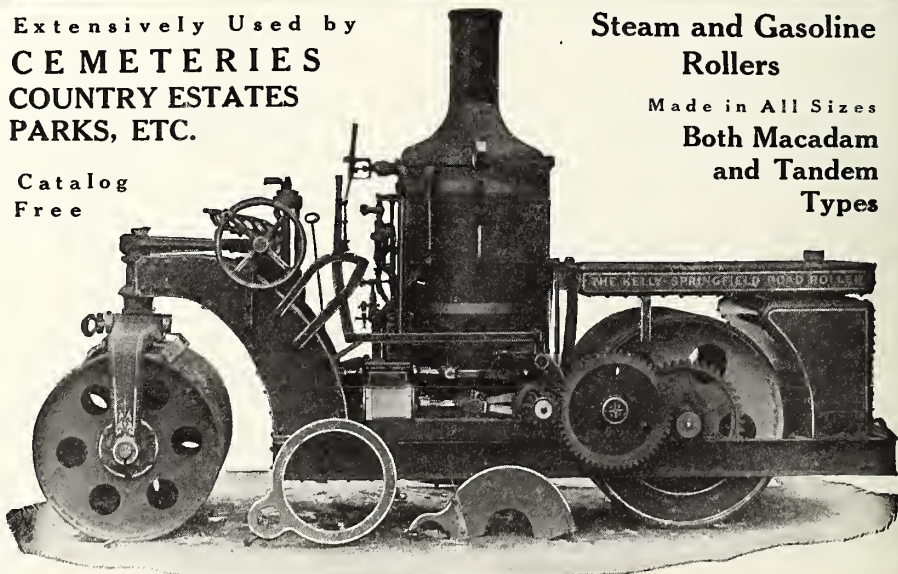
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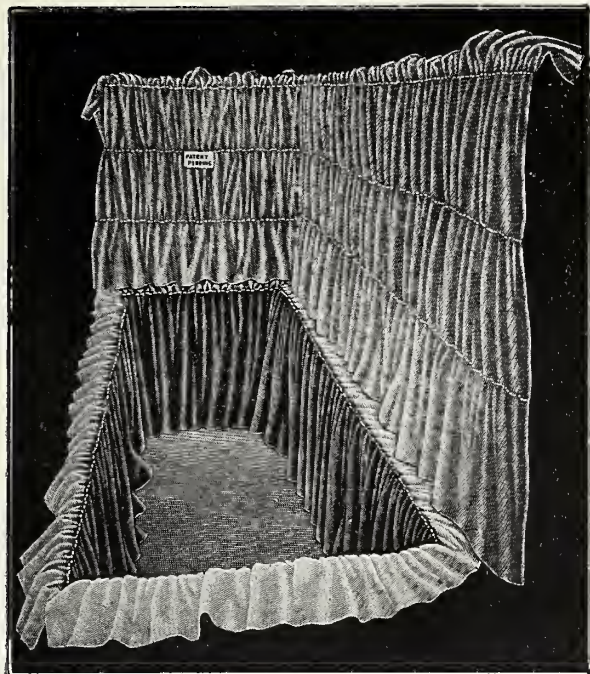
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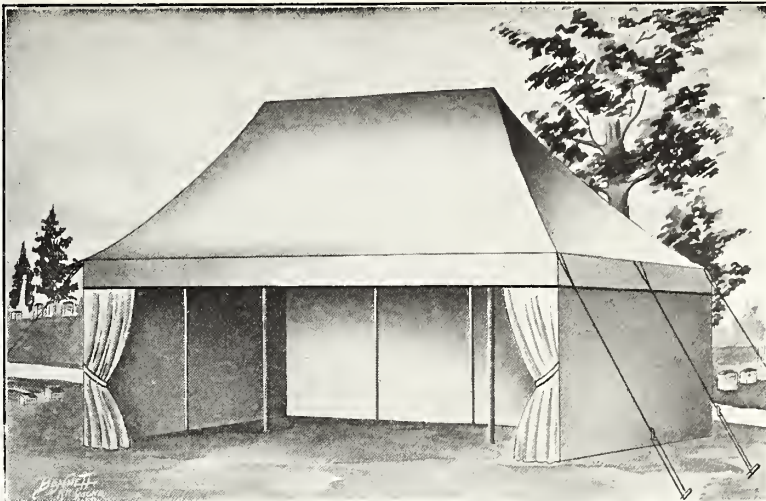
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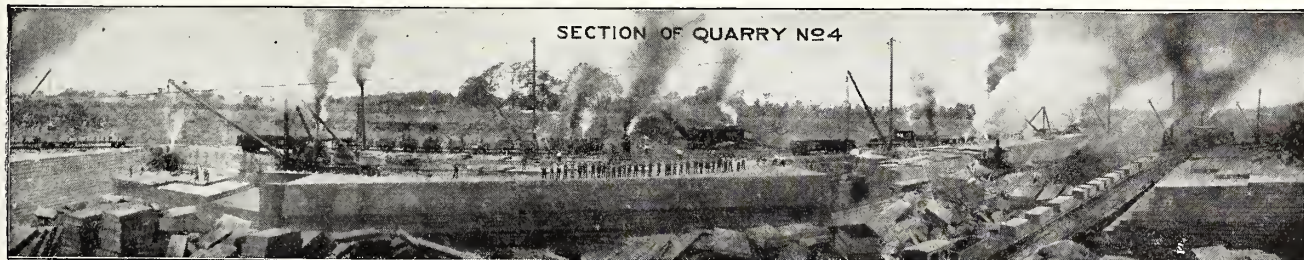
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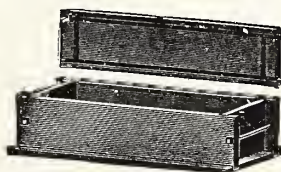
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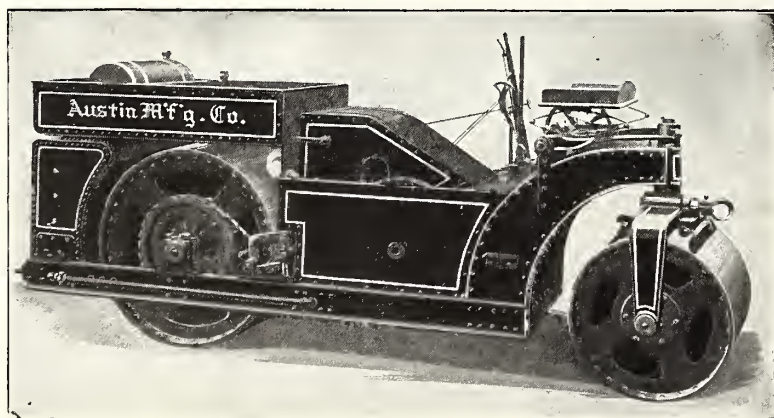
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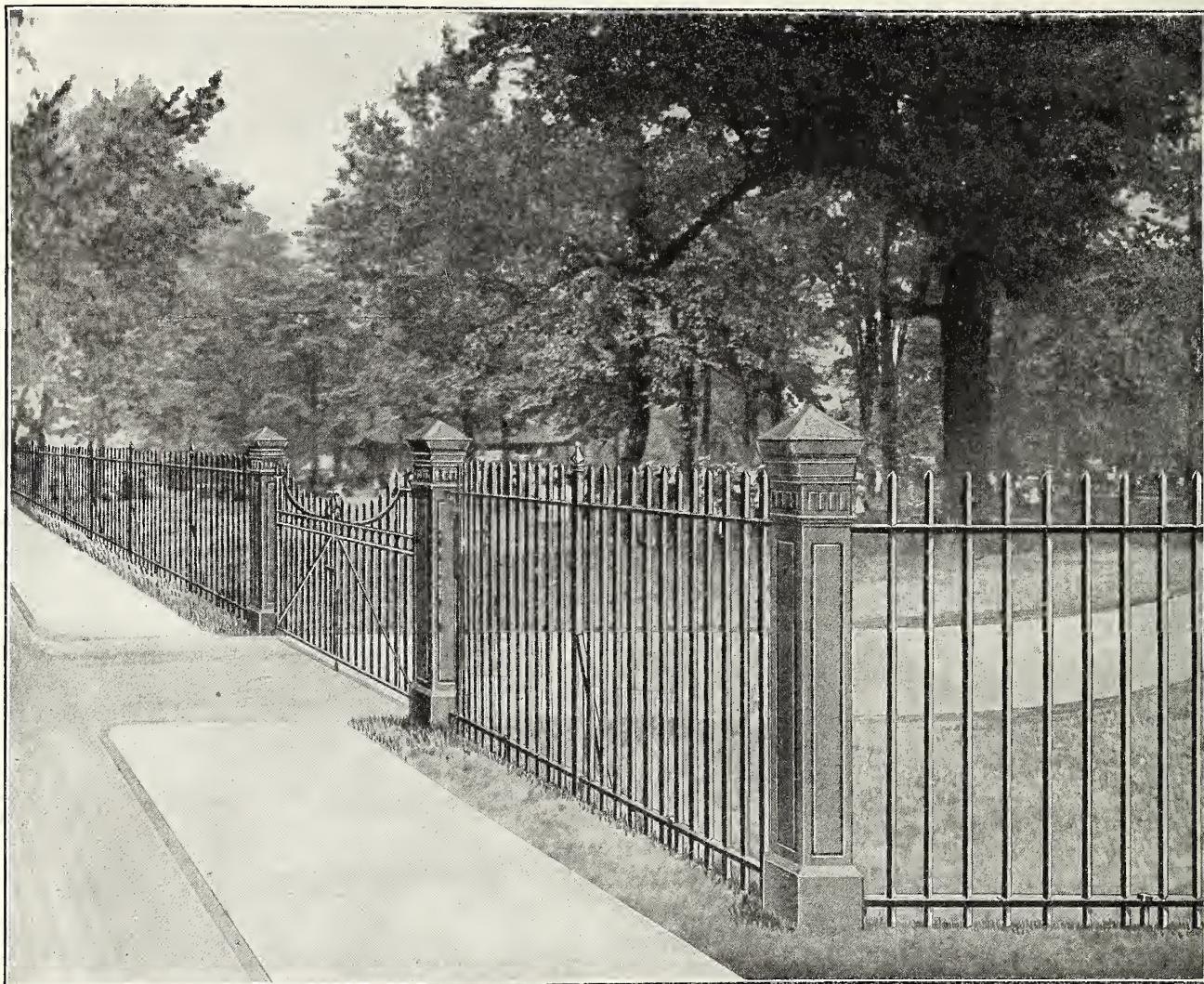
SPECIAL FEATURES IN THIS ISSUE

Progressive Park Work in Spokane—Cost Finding in Cemetery Work—
Organizing and Developing a Modern Cemetery—Selling Cemetery Lots on
Credit—Evergreens for the Central West—Evolution of London Burial Grounds



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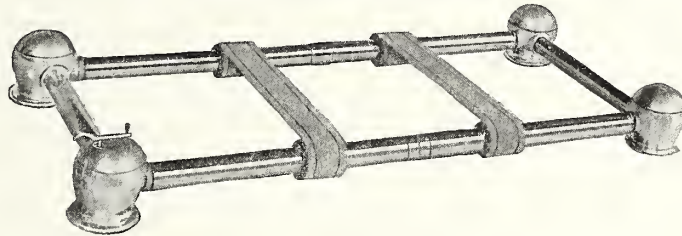
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FEBRUARY, 1915

EDITORIAL

VOL. XXIV No. 12

Possibilities of Municipal Forestry

During the last few years there has been considerable development in the practice of forestry by the cities of the country. A number of technically trained men have taken up this phase of forestry and are known as "City Foresters" or "Shade Tree Experts." There is a great possibility of extending this work by developing more or less extensive forest tracts in the vicinity of our towns and cities, both for their aesthetic value as parks and for commercial purposes. Very recently several municipalities have taken up forestry and are planting the water-sheds of their reservoirs and other sources of water supply. An excellent example is the city of Hornell, N. Y., on whose water-shed there has recently been planted 30,000 trees. Other municipalities that have taken up this work have been Middletown, Troy, Gloversville and New York City. Considerable planting has been undertaken on the slopes adjacent to the immense Ashoken reservoir in the Catskills. During the past year the city of Syracuse has been planting extensively on the water-shed of Skaneateles Lake, the municipal reservoir and is applying simple phases of forest

management to some 150 acres of wooded lands acquired and known as the City Forest. According to statistics furnished by the U. S. Forest Service, there are already ninety-seven municipal forests in this country, ten of which are in New York. The primary purpose of the work on the Syracuse municipal forest is to insure the best sanitary conditions and thus a clean and pure water supply. With the assurance of this object being accomplished, it has undertaken the practice of forestry along commercial lines on the wooded areas and expects to yield a definite revenue to make the operation a paying proposition. This area would otherwise continue in an idle and unproductive state. In some instances cities are planting up unsightly waste places near the municipal limits with the intention of eventually developing these tracts as forest parks, cutting through roads and paths and landscaping the ground after the trees have grown up to a suitable size. Rochester has developed many beautiful forest parks in this way and has gained an enviable reputation for its extensive system on the outskirts of nearly every part of the city.

Cemetery Business Management

We call especial attention to the excellent discussion of cemetery cost finding on another page of this issue because the business side of cemetery development is not often given the attention it deserves. The technical problems of cemetery development have been fully and freely discussed, but matters pertaining to cemetery business management are not as frequently discussed at our cemetery conventions or in these pages. The cemetery is one of the largest business institutions in the community, and in matters of accounting, finance and salesmanship its management de-

mands a business talent of a high order. Whether a cemetery be a private institution, run for profit, or an association of lot holders, its success depends to a large degree on successful business management. Its records and accounts must be faultlessly kept, its funds wisely handled and carefully invested, and its income conserved and added to with as much diligence as any other business institution. Efficiency, good business management and merchandising are as essential to a modern cemetery as to any other of our great institutions.

Editorial Notes

The arboretum established at Washington, in Rock Creek Park, through co-operation between the forest service and the District of Columbia, now contains 1,200 trees, comprising ninety-two different species.

The King of England has given permission to have a part of the royal estate placed at the disposal of the School of Forestry at Cambridge University for purposes of experiment and demonstration.

William Penn, in his Charter of Rights, provided that for every five acres of forest cleared one acre should be left in woods. Foresters today maintain that on an average of one-fifth of every farm should be in timber.

As showing the possibilities for tree growth in regions where irrigation has to be depended upon, it is pointed out that Boise, Idaho, has as many as ninety-four different kinds of ornamental and shade trees.

Those familiar with the Eastern mistletoe only have no idea of the great losses due to this parasite in the forests of the West, where it counts next to fire and insects in the amount of damage done.

The highest mountain in Montana, Granite Peak, with an altitude of nearly 13,000 feet, is in the Beartooth National Forest.

Norway has 144 tree-planting societies. The first was founded in 1900, and since then 26,000,000 trees have been planted, more than 2,000,000 having been set out last year.

The Uinta Mountains of Utah, included within the Wasatch, Uinta and Ashley national forests, should become a favorite recreation region because of the many small lakes within depressions scooped out by glacial drifts. Seventy such lakes can be counted from Reid's Peak, and one particular township, thirty-six miles square, contains more than a hundred.

Throughout the national forests the rangers are posting the roads with permanent guide signs which tell distances and directions, especially at forks and crossroads. The signs are usually put up in the winter, when other work tends to be light. On some forests the rangers go on snowshoes, dragging loaded sleds, and nail the signboards to the roadside trees.

The position of city forester is now offering a new field for men with a technical training in forestry. Fitchburg, Mass., is one of the latest towns to secure an official of this sort.

The Massachusetts Forestry Association offers as a prize the planting of fifty acres of white pine to the town which gains first place in a contest for town forests.

The Boise National Forest in Idaho had thirty fires during the past summer, yet twenty-eight were held down to less than ten acres, and of these, fifteen were less than one-quarter of an acre. The supervisor says this success was due to a lookout tower and to efficient telephone and heliograph service.

Forbach, Germany, is said to have the most profitable town forest known: it yields an annual net gain of \$12.14 an acre.

COST FINDING IN CEMETERY WORK

Address before the New England Cemetery Association, by W. H. Wheeler, of Mount Auburn Cemetery, Cambridge, Mass.

Efficiency in business and its importance has never been so greatly recognized as at the present time, particularly because of the demand for more wages, better labor conditions, and the increased cost of materials. Some method must be devised to meet these conditions. There is only one practical solution of this situation, and that is a keener realization of the existing possibilities in a particular business. To be specific, a system must be devised to eliminate waste, which is another way of saying that efficiency methods must be introduced.

Efficient systems and reliable statistics enable the management to keep in touch with the various classes of the work and to locate the responsibility for waste, lost time, etc.

Quite as essential in its bearing on efficiency is the process of finding just what it costs to do a particular job. Not only is this necessary to determine possible selling prices, but it gives us something with which to work looking towards reducing the cost of production.

Cost accounting, as a science, is a branch of the general accounting, its province being to analyze and record the various items of expense incurred in the different processes and to so compile these elements that the total production cost of a particular piece of work may be known. With the

cost books once established, the best modern usage is to incorporate such costs in totals in the general books. By this way the modern cost system builds up an interlocking series of accounts which furnish the material for detailed study of the operations.

This question of cost accounting is of great importance, especially in cemetery work, from the fact that many of the asking prices for work are based upon data gathered during previous years and under conditions greatly differing from those of the present day; also, as too frequently happened, from data unscientifically compiled, and if a thorough investigation were made it might show that the margin of profit was too small or, worse still, that there had been a loss. Time has passed when selling prices should be based on anything but true costs, and the old rule of thumb method must give way to carefully prepared costing data. While we are interested to know whether the business of the corporation, as a whole, has been successful, yet it is important to ascertain whether one department's earnings were not used in part to make up a deficit in some other department, and, how are we to know this except by compiled data?

Many business men are aware that it is necessary to know costs monthly, realizing that it is of importance to stop leaks or

rectify errors as quickly as possible; therefore, I propose first to deal with monthly costs and later with the much casier problem of yearly costs.

As mentioned above, it is by far better that the costing records be a part of the general books and that the double-entry system of bookkeeping be adopted.

It is only necessary here to deal with the books which have to do with costs, such as the ledger, journal, voucher or purchase register, payroll book and stock cards.

For accounting purposes it is desirable to divide the cemetery into departments, such as mechanics, grading and sodding, gardening, interments, care or grass cutting, ornamental, avenue, buildings, etc.; also a special department whenever any particular job is started which, when completed, becomes an asset. Each department should have a foreman, and the men in the different departments function through their foreman.

In the general ledger keep an account with each class of work, such as foundations, care, gardening, interments, etc., and where expedient have two accounts for each class—one for perpetual care work and the other for annual care work. All factors pertaining to the cost of production, such as labor, materials, tools and indirect expense, should be charged to each

Monthly Summary of Pay Roll Salaries & Expense
Month of _____ 19__

[illegible]

class through the purchase or voucher register, which I will describe later.

Modern accounting practice is to make all distribution through the purchase regis-

Daily Report

Mechanics

Name	No.	Int. No.	Process	Total Time
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	18			
	19			
Totals				

I hereby certify that the above account is correct

Base _____

Date _____

ter; that is, when an invoice or the payroll is paid this disbursement is charged to accounts payable or pay-roll and credited to cash, and when the distribution is to be made the purchase register is used as above, charging the different classes and crediting accounts payable or pay-roll.

All purchases and expenses incurred should be recorded in the month to which they apply. This record should be provided with columns, as follows: Date; in favor of; particulars; accounts payable; stock; a column headed for each class of work, one or two blank columns, and a sundries column. The total of the accounts payable column is carried to the credit of the accounts payable account in the general ledger; each individual item going to make up this total should be posted to the credit of the proper vendor's account in a subsidiary ledger. The footings of each of the other columns should be charged to corresponding ledger accounts. The footing of the accounts payable column should equal the sum total of the remaining columns.

When goods are purchased to go directly to a particular class, and are not to go into stock, the amount should be carried to the column so headed, although, generally speaking, all purchases go into stock. All goods going into stock should be entered on stock cards, and all withdrawals should be by requisition only, signed by the proper person. Have a card for each commodity, and the total of the balances as shown by the stock cards should equal the balance of the stock account in the general ledger. As far as possible, all expense for freight and hauling inward should be added to the cost of the goods; otherwise, it would have to go into an expense account

and be pro rated over the different classes.

Having discussed the financial books and their function in a general way, I now propose to show how the different elements of costs are collected and distributed over the different classes.

Labor: Whenever a man is hired there is a numbered hiring slip made out. These slips are kept on file in the office, and when an employee leaves or is discharged the slip is removed from the file; thus the office has a list of all men working in the cemetery.

Before commencing work for the day, each department's foreman is handed a time slip containing all the names of the men under his charge. These he fills out, noting opposite each name the number of hours worked that day on the different processes and returning the slips to the office the next morning.

For each class of work there is a symbol, e.g.: "A" would be for foundations, "B" for interments, "C" for grass cutting, and so on, and for the subdivision of a class, numbers may be used; e.g.: Foundations are divided into digging, mixing cement, and laying foundation; therefore A-1 would be the symbol for digging, A-2 for mixing cement, and A-3 for laying foundations.

To save the foreman unnecessary writing the class of work the men perform, symbols for each class and its subdivisions are printed on the back of the time slip.

Through the medium of tickets, instruction is given the foreman to do work on lots, except grass cutting, top dressing, etc.; in that case the foreman has the list.

Upon these daily time slips are columns

headed: Name of employee; number; ticket number; and several columns without heading. An illustration of the utility of this ticket is as follows: If an employee worked nine hours digging foundations, on ticket No. 100, the foreman, referring to the back of the slip, finds symbol corresponding to the digging of foundation A-1, and enters it upon the slip in one of the blank headings; he then enters opposite the employee's name the ticket number, No. 100, and under the symbol the number of hours worked, nine.

At present we are interested only in the class symbol "A"; the addition to the symbol, denoting the process of the class, is used for the subsidiary records when analyzing the foundation account.

From each daily time slip the hours are carried to a daily summary sheet of all the workmen except that of the teamsters, which will be explained later, columnarized and headed as follows: Employee's number; hours; rates; amount; foundations; grass cutting; gardening; interments; greenhouses; general expense, and any other headings deemed necessary, a line being used for each employee.

The amount carried to these different columns is expressed in dollars and cents. Data for the pay-roll is obtained from the individual time slips. All the columns are added and the total of each column will show the amount of labor for that day applying to each class of work.

Totals are carried to a monthly summary sheet with columns headed similarly to the daily summary sheet—the first column being for the date, and is followed

[illegible]

by columns designated for the different classes of work, a line being used for each day. The last item on the monthly summary sheet will be the distribution of the cemetery office salaries and Sunday expense. Such of the above as cannot be charged directly to some particular class is distributed in the ratio that the hours worked by the laborers in each class bears to the total hours worked, i. e., on the man-hour basis. To illustrate: Suppose the office salaries and expense for the month amounted to \$1,000 and the total hours worked in the cemetery amounted to 1,000, of which 100 hours was on foundation, then foundation would be charged with 100/1000ths of \$1,000, or \$100.

At the end of the month the different columns are footed and distributed through the purchase register.

Teaming: There are separate summary sheets for the teamsters, columnarized similarly to the labor summaries, except there is an amount column. Hours worked on each class are carried to the column corresponding to the class and the amount expressed in dollars and cents carried to the amount column. At the end of the month the different columns are footed. The total of the amount column is charged to teaming and credited to pay-roll.

Each class is charged for teaming according to the total of the hours as shown by the summary sheet at an estimated rate per hour. To get a basis for this estimate, take the records for last year and divide the total expense for teams and divide by the total hours the teams worked. Make this distribution through purchase register, the teaming account being credited.

Horses, harnesses and carts are asset items, but they depreciate and a yearly depreciation should be charged to teaming account, as well as all expense of upkeep.

We, therefore, have charged to this account: Teamsters' labor, depreciation of horses, carts, etc., and expense of upkeep; and there is on the credit side the estimated cost of service rendered as distributed over the different classes.

At the end of the year this account is adjusted by charging or crediting profit and loss with any difference, or it may be distributed on the same basis as expense.

Materials: Requisition orders reflect the materials used. These should be assorted as to classes. A summary sheet is used upon which is placed kind, quantity and cost of material for each class. The totals of this summary are carried to a monthly summary of materials, expressed in dollars and cents, the same as labor. Footings of the different columns of the monthly summary sheet give the cost of materials used in each class of work, and are distributed to the different classes through the purchase register.

Top Dressing: Top dressing purchased and labor on same, such as delivering to

pile, and turning, should be charged to top-dressing account, and where costs are arrived at only yearly this is distributed over the different classes according to the number of loads taken from the pile or on an arbitrary basis. Where monthly costs are desired, we meet a different proposition. Loads of top dressing used, and for what purpose, are reported the same as other materials and are charged to the different classes at an estimated rate per load. Adjustment is made at the end of the year, charging or crediting any difference to the different classes according to lots used, or it may be carried to P. and L., keeping in mind the quantities on hand at beginning of season, the shrinkage and amount on hand at end of season—the latter being an asset item.

Tools: This item should be a part of the expense, and the cost for tools each month should be estimated, using past figures as a basis, i. e., if the average yearly expense was \$600, and a tool is used for twelve months, the monthly charge would be \$50. An estimated tools account should be set up and credited with the estimated at the time the different classes are charged. All tools taken from stock should be charged to this account and credited to stock.

If there are any tools on hand at the end of the year, such as lawn mowers, shovels, etc., they should be appraised and carried into stock at the appraised value, crediting the estimated tools account.

It frequently happens that at the end of the season tools need repairing; therefore, it will be necessary to establish on the books a tool repair account, charging same with the residuary value of the tool; that is, the value after allowing for depreciation and estimated cost for repairs, and crediting the estimated tools account. Having charged all expense for repairs applicable to a particular tool, it is now ready to be taken into stock by charging the stock account with the residuary value, plus cost for repairs, and crediting the tools repair account.

Any differences between the debits and credits of the estimated tools account can be carried to profit and loss or distributed over the different classes using such tools.

These few examples cited show how items are classified as units and then carried on as accounts in the financial books. To determine the cost of each process it is necessary to subdivide the accounts, using a columnarized analysis sheet or book for this purpose. To illustrate the point, we will consider the class "Foundations." The sheet is headed Foundations, with columns headed for each process, such as

Digging, Mixing Cement, Laying Foundations—Taken from time slip.

Expressed in hours, and dollars and cents:

Materials—Taken from "Summary of Materials" sheet.

Teaming—Taken from "Teaming Summary" sheet.

Indirect Expense—Information found on "Monthly Summary" sheet.

The total of these different columns should line up with the foundation account in the general books.

Ticket Work: On the back of each ticket there should be an opportunity for the foreman to note labor, quantity and kind of materials used, and teaming time. These should be extended by the office force.

Add indirect expenses on the man-hour basis. Proportions of tools expense can be obtained on same basis. The total of these elements will give the cost of the job.

If it is not feasible to find monthly costs, the entire accounting may be kept in a distribution book with columns appropriately headed. To each class (as analyzed in monthly sheets) charge the labor, materials and tools as given out. At the end of the year distribute the indirect expense on whatever basis seems equitable. The teaming expense is ascertained by footing the teaming column, then dividing by the total team-hours, which gives a ratio. Multiplying this ratio by the hours worked on each class will give the teaming expense for that class. Double teams are reckoned as one and one-half single teams. Distribute the total expense of top dressing over the different classes by dividing the cost of top dressing by the total number of loads used, thus arriving at a ratio, and multiplying this ratio by the number of loads used for each class will give the cost of top dressing for that class.

When tickets are returned they should be figured and the amount credited to the class account, charging a finished class account. The balance of the class account would then be the cost of the work in progress. If all ticket work is cleaned up each year, there is no need of using the finished account. As soon as the ticket has been returned and figured, a bill should be made out, crediting the finished class account and charging accounts receivable. The difference between the debit and credit sides of the class account will show the gain or loss.

Thus you see that by adopting a method of accounting similar to the one I have described, you have not only charged to each class of work the natural elements belonging to that particular classification, but, also, you have obtained for each class the desired definite knowledge that is so potent and invaluable as a working basis for determining selling prices or eliminating waste.

One of my purposes today has been to arouse your interest in more efficient accounting methods in cemeteries, trusting that a committee may be appointed to consider this matter of cost accounting with a view of a uniform system of accounting that may be adapted to any cemetery.



THE VILLAGE GRAVEYARD.



THE SAME SCENE NEGLECTED.

ORGANIZING and DEVELOPING A MODERN CEMETERY

*By Sid J. Hare and S. Herbert Hare,
Landscape Architects, Kansas City, Mo.*

II.—Organization.

It is the purpose to treat this phase of the cemetery problem very briefly. The subject would allow of such discussion, including many legal considerations, which in the end would not apply to the various cities and states. Therefore only the main points will be considered.

The village cemetery is usually the outgrowth of necessity. Its ownership and administration are usually not well defined. If the church yard was not used, land obtained through donation or otherwise determined the location. There was no provision for care, for cutting the grass, and keeping fences, monuments, paths and roads in repair. In traveling from city to city, or town to town, we too often see the unsatisfactory result, proving the old statement that "what is everybody's business is nobody's business."

What we choose to call the "modern

cemetery" is a very different institution, a more permanent arrangement, with perpetual care. The organization for providing such a cemetery would depend upon the ownership. In the smaller cities and towns this is usually vested in the city. In the larger cities the most beautiful and successful burial grounds are owned and administered by corporations. There are, no doubt, two reasons for this. First, the cemeteries provided by the city, if any, were unsatisfactory, poorly managed, and with no provision for care in the future. Like much municipal business, they were monuments to inefficiency, and the citizens, in self-defense, were compelled to make better provisions. Second, a certain number of cemeteries have been promoted almost solely for the purpose of selling land at a profit. This may be excusable in some cases. A person who is rendering a serv-

ice to the community is entitled to a fair compensation, but the purely commercial aspect assumed by many companies in the sale of land, especially in auction sales, seems to tend toward creating an artificial demand, rather than supplying a need. Under favorable circumstances, a cemetery may be a very good as well as a legitimate investment for private capital, the same as electric plants, street railways, and other necessary utilities. People are willing to pay more for a lot in a well managed, privately owned cemetery than in a poorly managed one under public control. However, with the coming of commission government or other forms of efficient and business-like municipal administration has come a decided tendency toward public ownership of all public utilities, and this feeling may in time be reflected in the cemeteries, probably by providing more sat-



THE CHURCHYARD BURYING GROUND.



THE OLD CITY GRAVEYARD.

isfactory city cemeteries and making the others less necessary.

The methods of organizing or controlling a publicly owned cemetery are usually quite simple and need no explanation. The management of the park department in our large cities can be taken as an example. The power may be invested in a commissioner, in the case of commission government (in which event the commissioner of parks is usually the man); in a committee of the city council, or in a board of commissioners composed of three or five lay citizens, appointed by the mayor, as a rule, which commission is usually composed of persons especially interested in the subject, and is reasonably free from party political influence. This plan of a cemetery commission has proven very satisfactory and offers a field of usefulness and activity for women with the desire to be of public service. Directly in charge of the cemetery is the superintendent, who is responsible to the commission or commissioner, and the extent of whose duties

varies according to the size and character of the grounds.

In the case of a cemetery owned by a corporation the superintendent is responsible to the officers or directors. In such cemeteries the incorporators are usually citizens of the community where the cemetery is established. They may consider



A MODERN CEMETERY, SHOWING THE RESULTS OF CAREFUL ARRANGEMENT AND CARE.

themselves amply repaid by the mere existence of satisfactory burial arrangements or they may expect a reasonable return for the time and capital required. In other cases the arrangement may be more co-operative or mutual, each lot owner having a voice in the management or election of trustees, and the land sold at a price only great enough to cover the expenses of development and maintenance, and provide a fund for perpetual care.

To discuss further the details of the organization of corporations or companies and methods of procuring the capital would be only starting on a large subject and one open to much discussion.

Another class of cemetery really mutual in effect is that owned by societies or lodges or churches, the Catholic church being a good example. Modern methods of arrangement and care are often used in these, but the tendency, especially in lodges, is toward acquiring tracts in larger cemeteries, where the burden of management will be shifted.

EVOLUTION OF THE LONDON BURIAL GROUNDS

Address by W. A. Cochrane, Superintendent of the Hampstead Cemetery, London, at the First Annual Congress of the United Kingdom Association of Cemetery Superintendents.

The first evidence we have of the establishment of a cemetery is at the period when the Romans first colonized England. Indications of vast Roman cemeteries have been discovered in various parts of London, and when the city was confined within the city walls we find that the Romans established cemeteries by the roadsides leading to the various city gates. Burial within the city was prohibited, as the laws of the Twelve Tables expressly forbid burning or the burial of any dead body in any town or settlement. This law was, however, general to other nations of antiquity.

In the district now known to us as Spitalfields, when digging for pot-clay, many years ago, urns of various kinds were dug up full of ashes and burnt bones; there were also discovered stone coffins with bones in them—the remains probably of early Britons and Saxons—and some skulls and skeletons without coffins, the wood of which, it was conjectured, had long since disappeared.

In 1787 great numbers of urns were dug up at about seven feet below the surface in Goodman's Fields, which derives its name from one Goodman, who had a farm here in the reign of Queen Elizabeth. Stow, in his "Survey of London," states, "at which farm I myself (in my youth) have fetched many a half-pennyworth of milk, and never had less than three ale-pints for a half-penny in summer, nor less than one ale-quart for a halfpenny in winter, always hot from the cow, as the same was milked and strained." All that is now left to

commemorate this wayside country farm is Goodman's Stile and Goodman's Yard, Stepney.

Here, also, was found a small monumental stone, with an inscription declaring it to have been erected by his wife to a soldier of the Sixth Legion; another similar stone, inscribed to a soldier of the Twenty-fourth Legion, was found in 1776 in a small burial ground at the lower end of Whitechapel Lane. These monumental stones probably mark the site of Roman burial grounds used by the garrison of the fort which stood on the site of the Tower of London.

When Sir Christopher Wren was rebuilding St. Paul's Cathedral, after the great fire of London in 1666, he discovered, when excavating for the foundation, evidence of a vast cemetery. At a short distance from the surface were the graves of the Saxons lined with chalk stones, or in coffins of hollowed out stones; beneath these were the bodies of Britons, placed in rows with quantities of ivory or wooden pins of a hard wood, about six inches long; these were used to fasten the shrouds in which the bodies were wrapped; and at a greater depth, about fifteen feet from the surface, were found Roman urns and remains, thus indicating that old St. Paul's had been built upon a very ancient cemetery, in which not only successive generations but successive races had deposited their dead. In more modern years the churchyard, though much encroached upon and taken to enlarge the street around St. Paul's, was until recent times the burial ground for the parishes of

St. Faith's and St. Augustine's, the latter being united to that of St. Faith's after the great fire; here, until a few years ago, interments were a daily occurrence.

After the withdrawal of the Romans from Britain and the gradual conversion of the Saxons to Christianity, the growing prosperity caused the erection of churches, and the practice of burying within the church or in the immediate neighborhood originated first with the burial of St. Augustine under the portico of Canterbury Cathedral; the succeeding prelates to St. Augustine were all buried in the same spot. Such practices, once commenced in cases of a few, were sure to be extended to the many. For even when the superstitious belief held by the early Christians, that the emanations from the bodies of saints exercised a peculiar virtue upon all those who lay near them, had died away, there still remained that influence that often persuades the friends of the deceased in the selection of the grave at the present time, in spite of the many difficulties and disadvantages.

In the very early days, the burial within the church was only for a chosen few, as those whose rank, or intellectual, moral, or religious qualifications warranted it; this permission was gradually extended to those who could or were able to pay the heavy ecclesiastical fees levied by the church authorities for this privilege.

Before the great fire of London, in 1666, there were, within the city proper, ninety-eight parish churches, nearly all of which have burial grounds: of these only thirteen

escaped the general havoc which was made by the conflagration. Of the churches destroyed, eighty-five in number, fifty were rebuilt, and the remaining parishes were united to parishes with churches.

During the Great Plague, 1665, the burial of the dead was a most fearful and diffi-

the available space was well-nigh exhausted.

The control exercised by the then burial authority in the management of these grounds appears to be absolutely nil. The sexton seems to have practically pleased himself. He was not subjected to any rules, regulations or acts of Parliament as

295 feet by 379 feet, 14,000 bodies were buried in ten years.

A chapel situated in St. Clement's Lane, surrounded by houses, had a cellar sixty feet by twenty-nine feet by six feet deep, which was used as a burying place. The entrance to this cellar was from the inside



LOOKING TOWARD CHAPEL AND RECEIVING VAULT, CITY OF LONDON CEMETERY.



LAWN VIEW, CITY OF LONDON CEMETERY.

cult task; to relieve the churchyards, plague pits were established in various districts around London for the burial of persons dying from this dreadful disease. De Foe, in his "History of the Plague of London," gives a graphic description and harrowing details of the condition of London at this period. Out of a population of 384,000 persons, 97,306 funerals took place in the year 1665, of which 68,596 were deaths from the plague. This disease was supposed to have been imported from Holland, whither it had been transported from Egypt in some merchandise; it is said that the first death took place in the parish of St. Giles-in-the-Fields.

In previous years there had been visitations of the plague, which was fatal to a number of persons, as in the year 1592 there were 11,503 deaths from the plague with a population of 25,886; in 1593, 10,662 deaths with a population of 17,844; 1603, 30,567 deaths with a population of 37,294; 1625, 35,417 deaths with a population of 51,758; 1636, 10,460 deaths with a population of 23,359.

The fire of London, though destroying a great amount of property and rendering homeless large numbers of persons, thoroughly stamped out this highly dangerous disease.

As London extended into the suburbs new churches were built and churchyards and burial grounds were established, and even allowing for the provision of these new burial grounds, the proper capacity was often exceeded, and in some of the grounds

regards to burials taking place in the ground under his care, consequently no laws were broken. It was possible for any one to establish a burying ground without let or hindrance, and a number were established as private speculations; every Dissenting meeting house had its own burial ground, and anything in the shape of a cellar was converted into catacombs and vaults. From the lax way in which the burial of the dead was permitted to take place, it was only to be expected that the condition of the various places of interment degenerated into a scandal too shocking and revolting to contemplate, and considering the very great increase in the population, and that only a very few of the burial grounds exceeded one acre in extent, there was, as I have already stated, hardly any room left for a burial to take place in a decent manner, and the only way in which further accommodations could be provided was by removing the previous interments, or the disposal of the remains in some other way.

Parliament at last took notice of the existing conditions of these burial grounds, and on the 8th of March, 1842, appointed a committee to inquire into the whole subject. Without going too deeply into the evidence given before the committee, I will only give one of two instances, described in the daily papers of that time as "sickening and horrible."

In a burial ground owned by an undertaker named Martin, which only measured

of the chapel by a trap-door. The rafters supporting the floor were not even covered with the usual lathe and plaster. In this place alone twelve thousand bodies were deposited, not one of which had been placed in a lead shell. One can only imagine the condition and state of this building.

So much for the privately owned places of burial.

The evidence given by a Mr. W. Chamberlain before the committee was as follows:

"I was first employed by Mr. Watkins, the head gravedigger of St. Clement's Churchyard, Strand. From that time till the year 1836 I never opened a grave without coming into either coffins of children, grown persons, and what we term odd sizes, which we have been obliged to cut away, the ground being so excessively full that we could not make a grave without doing it. It was done by the order of Mr. Watkins and Mr. Fitch, the sexton of the parish, that these coffins should be chopped up, and the wood placed against the walls and the palings of the ground. We have come to bodies quite perfect, and we have cut away with choppers and pickaxes. We have opened lids of coffins, and the bodies have been so perfect that we could distinguish the males from females, and all these have been chopped and cut up."

The practice related in this particular instance in general to nearly all the other burial grounds of this great city of Lon-

don, the seat of science, the arena of invention, the vast amphitheater of all that is great, good and noble, all that is conducive to the comfort of health and the happiness of life—this London with its thousands of busy minds, only a few years ago tolerated these plague spots and condoned a state of things hardly understood today.

No wonder when evidence of this kind was reported in the daily papers it caused a sensation, and pressure was at once brought to bear upon the government to put a stop to procedure and conditions of this kind. One can hardly understand a bishop of London speaking in opposition to the passing of the Burial Acts.

Reformation had, however, already begun, for before the Burial Acts became law private bills were passed enabling joint stock companies to provide burial grounds, and cemeteries as we know them today were established.

The first cemetery to be opened in London was Kensal Green, which was then fifty-three acres in extent, consecrated on the 2nd of November, 1832; Norwood Cemetery, or, as it was first called, the South Metropolitan and Norwood, forty acres in extent, followed next, it being consecrated on the 2nd of December, 1837; Highgate next, twenty-two acres, opened and consecrated on the 20th of May, 1840; West-

minster, or West London Cemetery, now known to us as Brompton Cemetery, consecrated June 15, 1840; Nunhead Cemetery, about fifty acres, consecrated July 29, 1840, and the City of London and Tower Hamlets Cemetery, thirty acres, consecrated in

numbers of cemeteries were established, and there are at present something like twenty-four cemeteries in the County of London. In 1852 a further bill was introduced to amend the existing laws which provided authority to close the overcrowd-



GENERAL FOREMAN'S LODGE, CITY OF LONDON CEMETERY.

1841; the London Necropolis, 2,000 acres, opened in January, 1855; and last, but not least, the City of London Cemetery, Ilford, opened June 24, 1856.

Since the passing of the Burial Acts

ed churchyards and burial grounds, and at present there are only a very few of the churchyards and older burial grounds in which burials are now permitted to take place.

SELLING CEMETERY LOTS ON CREDIT—II

Symposium of Methods and Forms Used by Many Cemeteries in Lot Sales and Collections.

We do more or less credit business in the sale of lots, but do not use the contract form; simply insist on enough payment at time of purchase to at least cover the price of a single grave, with the understanding that the balance must be paid by a certain time and before any further burials are made. If payments are not made, we then issue a receipt for single grave and sell balance of the lot the first opportunity. We have had but one instance of this kind where we had to sell balance of the lot.

FAIRVIEW CEMETERY.

Little Falls, N. Y.

* * *

For over twenty years lots in Lakewood have been sold on a payment down of one-third the purchase price, the balance usually being divided into twelve equal payments and payable monthly, the deferred payments drawing 6 per cent interest. We have found this method to be entirely satisfactory and have had but little trouble with delinquents. If the payments are not made when due, the contract empowers the association to remove the remains buried on the lot to a lot equaling in value the total amount paid after deducting interest due and expenses of removal. When we find a person who can not, or will not, keep up the payments, we notify him that

he has a certain time in which to select a new lot, and in all cases they have either paid up or selected the new lot.

Up to the present time we have never found it necessary to move a body without the acquiescence of the lot owner.

Our attorney suggested some years ago that he would not advise the removal of a body to a new lot without an order from the court. During the period in which we have sold lots on credit we have had but three or four occasions to enforce the removal clause of the contract, and then (as stated above) in every case with consent of the lot owner. Following is a blank contract such as we use:

This agreement, made this.....day of....., 19....., between the Lakewood Cemetery Association, party of the first part, and....., part.....of the second part, WITNESSETH:

Said first party hereby covenants and agrees, that, upon the full performance by said second part.... of covenants named herein, it will, in consideration therefor, convey and assure to said second part.... by good and sufficient warranty deed the following described parcel of land in Lakewood Cemetery, Hennepin County, Minnesota, viz:..... according to the plat thereof.

Said second part....covenants and agrees to pay therefor to said first party as the full purchase price

of said land the sum of.....dollars in the manner following:.....dollars in hand paid, the receipt whereof is hereby acknowledged; and the further sum of.....dollars.....with interest at 6 per cent, payable semi-annually on the whole sum remaining from time to time unpaid.

And said second part...agree.... that any improvements on said premises or which may be made thereon shall be and become the absolute property of said first party and shall be entirely forfeited to said first party in case of failure to comply with the conditions of this agreement, and that no marker nor monument shall be erected on this lot till said lot is fully paid.

It is expressly understood and agreed that time is of the essence of this contract and that said second part.... shall hereby acquire no rights whatever in or to said premises save and except the right of interment thereon, which right shall be exercised according to the by-laws and rules of said first party and under the direction of the superintendent of said first party, said right to cease and terminate upon the failure of said second part.... to perform any of.....covenants herein, and said second part....hereby grant.... and convey.... to said first party all rights, save that above mentioned, in or to said premises acquired by the execution and delivery by said first party of this instrument; and said second part....further agree.... that if he shall fail to make any of the payments prescribed at times or in manner described herein, that then and in that case said first party may remove any and all interments thereon to another lot in said cemetery whose schedule price on the books of said first party shall be equal to or less than the gross sum at that time paid by said second part

....., after deducting the cost of removals, etc., and to execute a conveyance of said lot last mentioned to said second part...., which acts shall have the effect of completely terminating this contract, it being understood that said second part.... shall have twenty days after said default to makeown selection of said lot as aforesaid.

In witness whereof the said parties hereunto affix their hands and seals the day and year first above written.

Witnesses:

LAKEWOOD CEMETERY ASSOCIATION.

President.

Secretary.

(SEAL)

LAKEWOOD CEMETERY ASSOCIATION.

Minneapolis, Minn.

* * *

Following is a new form for sale of lots on credit used by Forest Hill Cemetery, Scranton, Pa.:

Agreement, made the day of, 191..... between the Forest Hill Cemetery Association, of Scranton, and

Said Association agrees to sell and convey, by Warranty Deed in fee simple, unto said..... the following described lot in said Cemetery, viz.: Lot No., Block No. Division, as designated on plot of said Cemetery, subject, however, to the By-Laws, Rules and Regulations of said Association.

Said lot contains..... square feet; and for said lot said..... agrees to pay to the said Association the sum ofDollars, as follows:

One-half of the purchase price on the execution of this agreement, at which time possession to one-half of said lot divided longitudinally shall be given, and the balance within one and one-half years from the date hereof with interest. Until said balance with interest is fully paid the said..... heirs or assigns shall have no right of control over, possession to, or interment in the remaining half of said lot and upon..... failure to pay all of said balance within the period aforesaid all of.....rights thereto shall be absolutely forfeited and said one-half lot shall revert to the Forest Hill Cemetery Association, without further process or notice, free, clear and fully discharged from all claims arising out of this agreement.

Signed and sealed in the presence of

FOREST HILL CEMETERY ASSOCIATION OF SCRANTON,

By

.....(SEAL)

.....(SEAL)

The following extract from the rules of Forest Hill also bear on the sale of lots on credit:

All lots must be kept clean of leaves and rubbish and the grass cut and trimmed as required by the superintendent. The trustees shall enter upon and care for all lots not otherwise cared for, and charge to the proprietor of such lot the uniform price fixed by the Association for the annual care of lots. No burial being permitted in any lot until all charges for the care of the same shall be paid.

Should the proprietor of a lot become indebted to the Association to an amount equal to the amount paid to the Association for such lot, less the cost of removing and re-interring in single grave plots all remains therein, and restoring the lot to the condition it was in before acquired by such proprietor, then the title to such lot shall revert to the Association, and the trustees may reinter all remains and dispose of such lot as they deem for the best interests of the Association. Provided, the trustees shall give the proprietor notice of their intention to take possession of the lot unless the indebtedness shall be paid within six months from date of such notice, which notice shall be mailed to the latest P. O. address furnished the Association by the proprietor.

In Philadelphia there seem to be a number of cemeteries that have the same plan as ours, with some possible modifications. Ever since we organized, over twenty-three years ago, we have been selling burial lots on the twenty monthly payment plan, or 5 per cent of the price of lot payable each month. The fact that we have continued this plan all these years naturally tells its own story, namely, that we are entirely satisfied with it and have no thought of changing it. In a city like Philadelphia, where there is so much competition, if a cemetery did not have some salesmen selling lots it would almost die and it would be utterly impossible to continue improving the grounds unless there was a continual sale of lots. It is no exaggeration to say that probably 80 to 90 per cent of our lots are sold that way, and it might be just as safe to say that 50 per cent would never have been sold except on some such plan. Where cash is paid within thirty days we allow a discount of 6 per cent. We employ a regular collector and have the entire city divided into districts, making the calls not just thirty days from time of sale, but on a certain day of each month, say, the first Monday, second Wednesday, etc., and in this way he is calling on some purchaser almost every weekday in the month. Every third month there comes the thirteenth week in which no calls are made, and he is employed along other lines. We frequently have lot holders discontinue their payments. By the terms of the agreement which every purchaser signs, the lots are foreclosed and the amount paid is forfeited. This agreement reads as follows:

This Agreement made this..... day of, A. D. 19..... Witnesseth that the Hillside Cemetery Company agrees to sell and..... agrees to purchase the right of sepulture in Lot No..... in Section of said Cemetery Company's ground for the price or sum of..... Dollars, upon the following terms, to wit:

That if the whole purchase money is paid in cash..... per cent discount shall be allowed, or otherwise the sum shall be paid at the rate of twenty (20) equal monthly instalments of..... dollars each; the first instalment (the receipt of which is hereby acknowledged) at the execution hereof, and the next and subsequent instalments payable at the office of said Company, or to its authorized collector until paid in full.

It is understood and agreed that the right of sepulture in said lot is sold upon the terms and conditions herein above expressed, and subject to any and all By-laws now in force, or that may be hereafter established by said Hillside Cemetery Company from time to time, for its government and the protection of its lot owners; it being distinctly understood that this agreement shall not, nor shall any Deed made in pursuance thereof, give to or vest in the purchaser, any right to inter in said lot anything other than the remains of white human beings, nor shall any interment be made except upon a permit issued by the Cemetery Company in accordance with its rules and regulations.

Provided further, that where all instalments due to date have been paid, the insurance feature, and privilege of immediate interment, shall be in effect.

The purchaser further agrees, that if three of the said instalments shall be in arrears and remain so for a period of six months, all claims to the said lot and rights therein shall be deemed released to said Cemetery Company, which shall have the option to collect the balance due or to retain, as liquidated

damages, all sums theretofore paid, and to remove any bodies that may have been buried in said lot, reinter them in some other portion of said Cemetery, and to resell the above described lot.

Witness

Name of Purchaser

Occupation

We permit a burial in lot immediately, but will insist upon a first payment of 20 per cent. Where such burial is made it gives us a greater hold on the purchaser, because we reserve the right to remove said body to another section reserved for single graves if the monthly payments are not made. We rarely make removals, however, because the owner generally makes every effort to pay rather than have the bodies removed. Where there is a burial, even where there is no burial, but a disposition to pay, we lengthen the time of payment beyond the twenty months, but after the two years expire we charge 6 per cent interest on the balance due. We feel this is a good plan because it gives the selling agent a good argument for people to purchase a lot before one is actually needed, and on such easy terms they do not feel themselves buying it. In addition we can afford to be lenient, because we always have the collateral (the lot) still in our possession, and where time is extended we are receiving 6 per cent on all such outstanding accounts.

HILLSIDE CEMETERY.

Philadelphia, Pa.

* * *

We sell lots on time, as the form below will explain, and all purchasers are held strictly to the contract. No exception, absolutely. Following is our memorandum of agreement:

No.....

MEMORANDUM OF AGREEMENT,

Made this day of..... I..... between the City of Rochester, by the Commissioners of Mount Hope Cemetery, part of the first part, and part of the second part:

Witnesseth, That party of the first part, in consideration of the sum of \$..... paid and to be paid by part of the second part, does hereby agree to sell to part of the second part Lot No. Sec..... (or) Range..... containing square feet in Mount Hope Cemetery, upon the following terms and conditions, viz.: \$..... to be paid at the office of Mount Hope Cemetery by part of the second part, upon the execution and delivery of this contract, and the balance to be paid in instalments of \$..... each at the same place, at the end of each months thereafter, until the entire amount shall be fully paid, when said second party shall be entitled to a deed in the usual form.

If the said part of the second part shall fail to pay any one of said instalments for a period of months after the same becomes due and payable, then and in that event this agreement shall terminate and become void, and said party of the first part shall have the right to retain all moneys previously paid by said second part to apply upon this contract, for the use of said Cemetery, and all rights of said second part to said property hereinbefore described, shall cease.

It is specially understood and agreed that no interment shall be made upon said property hereby conveyed until said sum of \$..... has been fully paid, the privilege being hereby given to said second part to pay in full for said property at

any time after the execution of this agreement.

It is further agreed that if said part of the second part shall purchase from said party of the first part any other lot in Mount Hope Cemetery at a price not less than the amount paid upon this contract, and is not in arrears of payment for more thanmonths under the terms of this agreement, then and in that event said second part shall have the right to have applied upon the purchase price of said other lot all sums paid to apply upon this contract, upon the legal surrender by said second part and by all persons who have obtained any rights in or to said property above described, of all rights under or in pursuance of this agreement.

It is further agreed that said second part shall have the right to assign his interest under this agreement to any person or persons, but no such assignment shall be binding upon or affect the rights of said first party until written notice of the same shall be given to said first party by said second part at the office of Mount Hope Cemetery.

In Witness Whereof, said parties have signed this agreement in duplicate, and do hereby bind themselves, their successors, assigns, heirs, executors, and administrators firmly by these presents.

The City of Rochester, by the Commissioners of Mount Hope Cemetery,

Per
Superintendent.

Address,

.....

.....
Part of second part.

Received \$.....

Received \$.....

Received \$.....

Received \$.....

We have had, in my experience, two cases where payments were discontinued, and in both cases, they being very poor families, we refunded the amount paid and sold the lot to other parties.

We have had no case where it was nec-

essary to force the payment, as the lot is ours until fully paid for, and no burial can be made until such is the case.

MT. HOPE CEMETERY,

J. W. Keeler, Supt.

Rochester, N. Y.

* * *

When customers ask the terms of sale, we say cash. If they are responsible and trustworthy, we try to meet their desires—one-third down, one-third in six months, and one-third in one year. We demand payment of grave or vault then. If the terms are not met and but one interment is made, we give personal notice that no further interment can be made until all arrearages are paid. You can give a statement of amount of sale or balance, but be careful not to take a note for it, as that gives the buyer the privilege of future use. In the sale of a lot the book account is safer than a note. As far as I can learn, no state has, or can make, a law that would let you remove a body without the consent of the owner. Further, the body of a husband or wife cannot be moved from the family lot, as the parents or owner have exclusive control. Then, should they be dead, there is no authority left. Be very careful and cautious about removing bodies, as all courts would decide against you. I have but one delinquent, for \$25, and I set forth on the lot book record.

OAKWOOD CEMETERY.

Geneseo, Ill.

part sand, and one part clay loam. After the place is carefully prepared and left high enough to secure the proper drainage the grave will be ready for planting. Myrtle should be planted in little bunches about three inches apart and as nearly as possible the same depth as it previously stood. The best time for planting is as early as possible in the spring and from July 15 until frosty nights appear. It should be borne in mind that from the time the myrtle is dug the roots must be moistened and shaded, and that, no matter how carefully the work was done, it was impossible to take up the entire root system. Therefore the plants must be balanced by cutting them slightly back. After planting and during dry weather, the myrtle grave should be frequently watered. In the early spring the old foliage may be cut off so as to make room for the new. Commencing in May, the myrtle grave should be trimmed to the desired height, size and shape to form a beautiful blanket. Under such conditions the work of maintaining the grave would be less and better results gained."

* * *

The easiest method is to purchase plants from the nursery or dig them from some bed that can spare some. Set the plants in well-prepared soil about twelve inches apart, cultivate and weed until the area is covered with a mat growth. Personally, I should not recommend the use of a myrtle covered grave, as it spreads beyond bounds, is hard to maintain in a neat condition without labor, and the result is no better than good turf. The only reason for a myrtle grave is that myrtle will grow in dense shade, where the usual grass will not do well. To make the grave and its surroundings look well it would be better to let in more sun and moisture.

PAUL L. MUELLER,

Landscape Architect.

Minneapolis, Minn.

* * *

In planting a myrtle grave fill the grave with a good, rich, loamy soil—not too heavy a soil—to the depth of from 8 inches to 10 inches. Plant the grave full enough so that the vines of the myrtle will cover, or nearly cover, the surface of the grave the first season. This will prevent the soil from getting heated and baked from the sun and will insure a stronger growth of the myrtle.

Water the plants during the summer whenever necessary, avoiding over-watering, so that the soil does not get saturated with water. Keep the grave free from weeds and loosen the soil between the plants frequently until the entire surface of the grave is covered with vines.

In the fall, as soon as the frost has formed a thin crust over the ground, put on a layer of dry leaves—not too heavy. Cover the leaves with branches or brush

ASKED AND ANSWERED

An exchange of experience on practical matters by our readers. You are invited to contribute questions and answers to this department

Auto Funeral Car.

In the May (1912) issue of PARK AND CEMETERY there is a description of an automobile funeral truck. Can you tell me if they are in service at the present time and where they can be purchased? If you will kindly give me name of the company that makes these trucks, same will be greatly appreciated.—J. L., Ky.

The automobile funeral car described in our issue of May, 1912, was patented by Bellett Lawson, Jr., superintendent of Elmwood Cemetery, River Grove, Ill. The S. W. Mather Casket Co., of Cleveland, O., manufacture a very similar car.

Maintaining Myrtle Graves.

What is the best way of planting and maintaining a myrtle grave?—J. B. C.

This is a question in which I have been interested for a long time. Myrtle does not thrive in this climate, and we therefore resort to planting ivy entirely. The best myrtle graves I have seen are at Spring Grove, Cincinnati, and in the cemeteries at Kansas City.

GEO. M. PAINTER,

Supt., Westminster Cemetery.

Philadelphia, Pa.

* * *

On receipt of your inquiry I said to one of our good boys: "I have been asked,

"What is the best method of planting and maintaining myrtle?" Won't you please write out for me the answer?" And the next day I said the same thing to another. Enclosed you will please find the result. They have the habit of working rather than writing, and it is needless to say that they did not compare notes. Our method of growing myrtle in a large box, which can at any time be transferred to the grave, giving immediately the effect of older planting, was described in the last issue of PARK AND CEMETERY.

FREDERICK GREEN,

Sec.-Treas. and Mgr., Lake View Cem.

Cleveland, O.

Following are the two contributions from Lake View gardeners referred to:

"In order to obtain satisfactory results, I would emphasize the fact that too much care cannot be taken in preparing the place where the myrtle is to be planted. Where the soil is not good, the space should be excavated from 6 inches to 8 inches deep. In case of a hard, clayey bottom, the earth should be loosened up and enough sand or gravel mixed with it to secure the proper drainage. After the hole is dug, it may be filled in with the following mixture: One part leaf mold, one part old manure, one

of some kind, preferably branches of evergreen, to keep the leaves from blowing away during the winter. Uncover in the spring, as soon as the frost is out of the ground.

THEO. CORTEU,

Gardener, Graceland Cemetery.

Chicago, Ill.

* * *

In regard to planting and maintaining myrtle graves, we have to say that in the climate of Pennsylvania, and, the writer expects, in Ohio, Indiana and Illinois—certainly in Pennsylvania—plant the myrtle in good soil, about five rooted plants in a group, in May or June. The writer would use five groups wide, about two and one-half inches apart, fifteen groups long, four inches apart to a grave. Weed during the summer, a little pulverized compost or sheep manure the first winter and third winter, and weeding and intertwining of stems.

THE WEST LAUREL HILL CEMETERY CO.

A. L. Smith, Treasurer.

Philadelphia, Pa.

* * *

Collecting for Annual Care.

Where assessments are made for annual care of lots, what is the best method of collecting?—B. A., Ill.

Regarding assessments for care of lots, would say that the success of collections

would entirely depend on the conditions and what agreements or arrangements had been made at the time of the sale of the lots and the method of collecting would depend on this. If the lots are sold with the understanding that annual payments are to be made, and lot owners refuse to pay, I do not see any other way except to discontinue the care after two or three years and charge that amount to the lot for collection before another interment can be made on the lot. Bills should, of course, be mailed annually, or more often, so that the lot owner may not have any excuse to say that he did not know anything about the account. I find that a majority of lot owners pay their annual bills when rendered for the first few years after bereavement, but as time goes on, their interest is not so great and they are liable to be neglectful.

THOMAS WALLIS,

Superintendent, Rosehill Cemetery.

Chicago, Ill.

* * *

Promoting Perpetual Care Sales.

What is the best way to advance the sale of perpetual care lots?—L. M. C., O.

I take it that the question is entirely separate from that of obtaining such provisions after a lot is sold and that the perpetual care spoken of is the perpetual care of individual lots, called endowment, as

distinguished from the general perpetual care of cemetery, as a whole. My experience and observation convince me that nothing will advance the idea so much as the actual maintenance of a section or sections to be sold strictly under perpetual care, providing such is not already being done. I find that seeing is believing, and to be able to show the results obtained by the application of this idea is the strongest argument in its behalf.

T. H. LITTLE,

Asst. Sec., Mt. Hope Cemetery Assn.

Chicago, Ill.

* * *

Plans for Parks.

One of our customers is interested in the laying out of a small park in a city in the South, and has asked us to obtain for him some good book or series of photographs and designs on the subject of parks or formal gardens, and we beg to inquire whether you publish any of this nature.—
——, Engineer, N. Y.

We do not know of any book or collection of pictures showing how to design or lay out a park. Your customer should have the advice and assistance of an experienced landscape architect in planning or laying out park grounds of any size. Any of the landscape architects who advertise such service in *PARK AND CEMETERY* would be able to give him expert assistance.

WELL PLACED SCULPTURED CEMETERY MEMORIAL

The Ludeke Memorial at Fairview, N. J., illustrated herewith, is one of the most original and interesting forms of the handsome sculptural memorials of which we have shown a few distinguished examples in these pages. The architectural form, the sculpture and the setting of the memorial have been wrought with fine artistic feeling and harmony of parts. The memorial is the work of Ulrich H. Ellerhusen, the New York sculptor. The bases and flower boxes are of Barre granite and the die, with its delicate relief carving, of Tennessee marble. The work is 7 feet 6 inches high by 6 feet 9 inches wide. The die was executed by Mr. Ellerhusen himself. The carving of the marble he did in the open, with the work facing southwest, as is the finished memorial. Though carefully pointed from his plaster model, in finishing he emphasized or reduced details as the outdoor light demanded, so that when the stone was put in place he had precisely the same effect that he had secured on the plastilina model in his studio. The relief is only 1¾ inches high and has been handled with unusual skill in securing strong character and light and shade effects. The granite work was accurately cut after the sculptor's drawings and all the work erected by William Luckhardt, of West New York, N. J., one of the oldest men in business there. The view of the rear of the memorial and lot illustrated shows the handsome landscape setting of the memorial, which was the subject of

careful study by the sculptor. A really fine picture of cemetery landscape gardening has here been secured. The lines of the walks on the gentle slope, the bushes and trees form a restful ensemble, emphasized rather than marred by the simple lines of the

grave. The background is formed by a round bed of small trees, around which a double ring of plots are arranged, the Ludeke plot forming a section of the inner ring, bordered by the two sidewalks and marked in the rear by the festoon-shaped



REAR VIEW OF LUDEKE MONUMENT, SHOWING LANDSCAPE SETTING.

stone. This picture shows the layout of the whole plot and the monument proper to better advantage than any absolute front view could, for when one arrives at the latter point of view the eye naturally centers on the relief. The planting, done under the sculptor's direction by H. Bluetgen, a local gardener, includes the flowers and boxwood trees in the bases and on the

flowerbed, in front by two bushes. Two horizontal bars of flowers fill wide space in foreground. The color scheme on the grave is low in tone, not interfering with the formal arrangement of flowers (begonias and geraniums), which harmonize in color with the Tennessee marble, give the plot a cheerful appearance and echo the horizontal lines of sidewalks and flower-box bases.



THE FALLS, INDIAN CANYON PARK, SPOKANE

The first annual report of the Park Board of Spokane, Wash., is an unusually interesting book embodying in a beautifully illustrated volume a history of park development in that city and a complete descriptive survey of the park system.

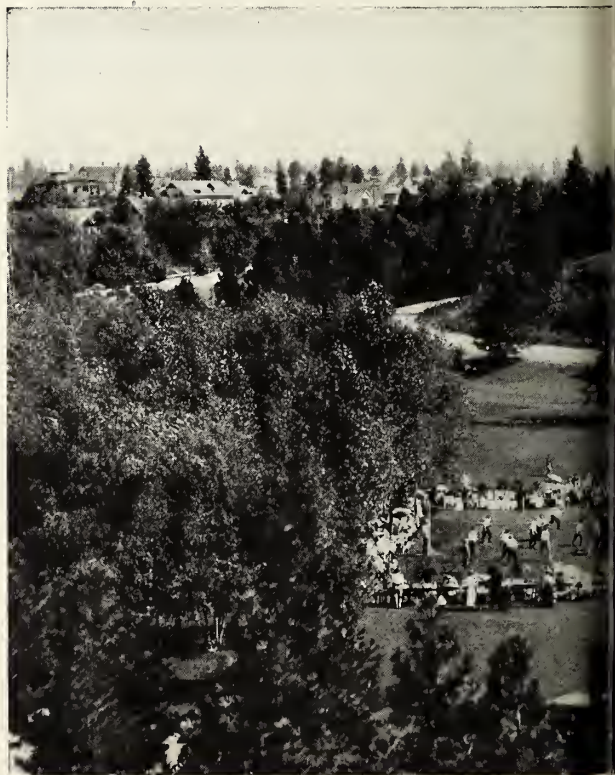
Some remarkable development and extension work that has been accomplished under Superintendent John W. Duncan is

described in detail, and the report of Olmsted Brothers, which has been the guide in development work, is published in full.

The policy of the board during the first six years of its existence has been to acquire the land for the establishment of a modern park and playground system in accordance with the general recommendations of the Olmsted report, while such

PROGRESSIVE PARK

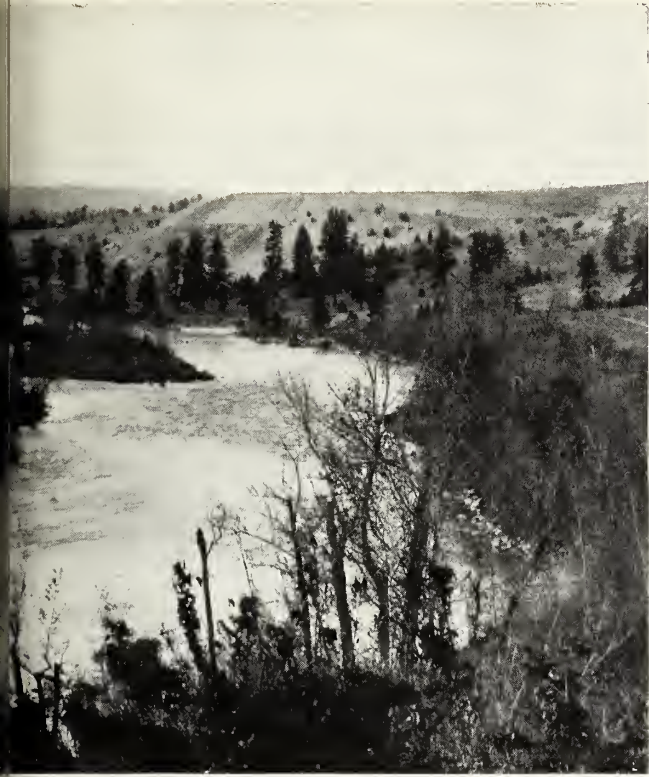
land could be acquired at a low price and before the desirable sites should be rendered unavailable by the cutting down of the natural growth of trees and shrubbery, and the extension of the city streets and construction of buildings. Land requirements have been practically completed and



PLAY FESTIVAL, MANITO PARK, SPOKANE.



WADING POOL AND SHELTER, CANNON HILL PARK, SPOKANE



REVIEW ROCK, CLIFF PARK, SPOKANE.

WORK IN SPOKANE

the Park Commission is now entering upon a period of construction and development.

Superintendent Duncan's report calls attention to the fact that during the past three years, and especially the last two years, the maintenance has been kept at an excellent standard and extensive improve-

ments undertaken. These improvements have been the building of drives, green-houses and flower gardens in Manito Park; the grading, planting and completion of Canyon Hill Park; the grading, building walks, planting and completion of Cliff Park; the grading and planting around the city reservoir at Ninth avenue and Pine street; the remodeling and planting of the

slopes at Liberty Park; the grading and planting of the Interstate Fair grounds; the remodeling and planting of Corbin Park; the grading and planting of Hay's Park; the grading and planting of Audubon Park; the grading and planting at Franklin Park; the grading and planting at Lincoln Park; the grading and planting at Minnehaha Park; the grading, planting,



TEPEES, INDIAN CANYON PARK, SPOKANE.

laying out walks, lake and tennis courts at Mission Park; the installing of tennis courts at Coeur d'Alene Park, and the grading of the drives in Down River Park, Indian Canyon Park, Palisades Park and High Drive Parkway.

In the playgrounds, all of the improvements have been done during the past year. They consist of the grading, planting and installing tennis courts, ball field shelter and gymnasium apparatus at U. S. Grant Playground; the grading, seeding and installing of tennis courts, shelter, wading pool, gymnasium apparatus and ball fields at A. M. Cannon Playground; the installing gymnasium apparatus at Glass Playground; the grading and installing ball field, swings and teeters at Ruth Playground; the grading and laying out of ball fields, tennis courts and installing gymnasium apparatus in the Interstate Fair Grounds; the grading, laying out ball field, building bowling green, tennis courts and installing gymnasium apparatus at the south end of Manito Park; the laying out of ball fields at Underhill Playfield; the grading of the stadium site and building of bleachers around the same; the grading, building of wall along the river bank, installing gymnasium apparatus, building wading pool and swimming pool and handball court at Sinto Triangle.

With a few exceptions, the park system is now practically completed as regards area, but a few missing links are needed to complete the continuous linking together of the system as a whole.

The river banks are, perhaps, now more important than any other, and a lower level drive as planned, commencing near the Monroe street bridge, along the north bank of the river to Down River Park, is one of the most desirable and practicable features to be accomplished.

On the southerly side of the river, with the enlargement of the site and building a permanent stadium, the superintendent recommends that a drive be built along the river bank to connect with High Bridge Park at A street, also with Riverside Park where Latah Creek enters the Spokane River, and also with the Indian Canyon Park near First Avenue and the west city limits.

The Rim Rock Drive, which runs northerly along the most scenic bluff within four miles of the center of the city, should be continued through the Fort George Wright Reservation and continued in a northerly, easterly and southerly direction through the Castle Hill additions, until it connects with the Elliott Drive.

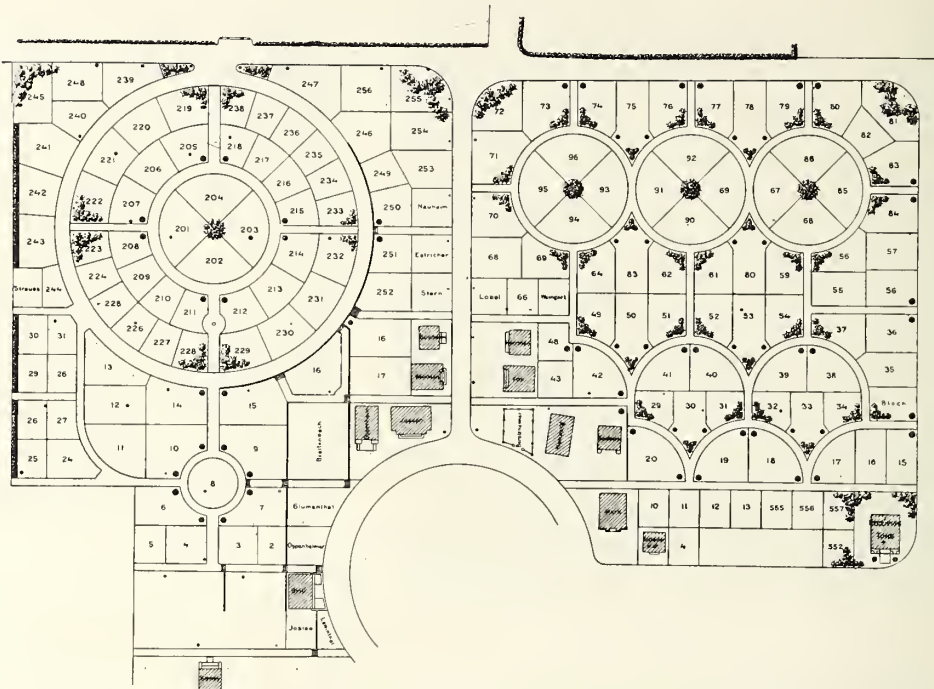
The expenditures for the Park Department for the calendar year 1913 were as follows: Maintenance, \$80,584.03; improvement, \$104,150.84; land purchases, \$129,628.49; total, \$314,363.36.

The officers of the Board of Park Commissioners of Spokane are: A. L. White, president; H. J. Gibbon, secretary; John W. Duncan, superintendent of parks; B. A. Clark, supervisor of playgrounds; R. J. Clarke, park engineer.

REPLANNING OLD SECTION OF A CEMETERY

The accompanying plan for the rearrangement of a small part of Cemetery Beth-El, Brooklyn, is of interest in showing the value of a carefully considered variation from the straight path system.

according to the old plan, and, besides, a large number of good trees that should not be disturbed limited the locations of new paths to quite an extent. It is encouraging to note that although the cost of the new



REARRANGEMENT OF SECTIONS B AND E, BETH-EL CEMETERY, BROOKLYN, N. Y. Otto Sonne, landscape engineer.

The two sections, B and E, were originally laid out with straight cement paths, 40 feet apart and two tiers of rectangular lots in each space, a system that had been followed entirely on the older parts of the cemetery. The management, however, had become aware of the depressing monotony, forever growing, and resolved on a change, with this new design as the result. The problem presented some difficulties, as a number of lots had been sold and occupied

drives, cement paths, retaining walls, grading and planting is considerable for two and one-half acres, the management figures that the increased value of the lots will cover the cost of construction ten times over and make the change doubly satisfactory in being as much a financial gain as an esthetic one.

The plan for this work was made by Otto Sonne, the New York landscape engineer.

THE OBITUARY RECORD

Loren Y. Stephens, superintendent of Green Lawn Cemetery, Columbus, O., was stricken suddenly with heart failure December 21 and died within a few minutes. His death was very unexpected, as he had been in excellent health. Mr. Stephens was the third superintendent of Green Lawn Cemetery, and had held that position for eleven years. His father, Adam Stephens, who died in 1903, was the second superintendent of the cemetery, which originally consisted of eighty acres, when it was bought for a burying ground in 1848. It has been increased in size from time to time since then. Mr. Stephens, while his father was superintendent, was for many years employed by the cemetery association as civil engineer and assistant superintendent. He was 61 years of age. He is survived by his wife, Mrs. Bertha Stephens; one son, Brentall, aged 11; one daughter, Josephine, aged 9; two brothers,

Sherman F. Stephens, florist, of Columbus, and John J. Stephens, superintendent of Crown Hill Cemetery in Indianapolis, Ind., and two sisters. He was a member of the Uniform Rank, Knights of Pythias, and of the old Columbus Riflemen. He was one of the most influential men and a tireless worker in the Ohio Association of Cemetery Superintendents and Officials and was always ready to give his knowledge on cemetery work and management in the interest of the association and the beautifying of the resting places of the dead. January 14 the Board of Trustees held a meeting and appointed John Schmidt as superintendent of Green Lawn Cemetery. Mr. Schmidt has been connected with the cemetery for twenty-five years in various capacities, and at the time of his appointment had charge of the office at the cemetery.

EVERGREENS FOR THE MIDDLE WEST

*An address by A. H. Hill, Dundee, Ill., before the
North Shore Horticultural Society at Lake Forest, Ill.*

In reviewing the three great periods of geological history we find that the first period consisted principally of flowerless plants; the second period of flowerless and a few seed-bearing plants; the third period the seed-bearing plants constituted much the larger portion. The family that has most universally pervaded every stage of vegetation is that of the conifers or evergreens. The ancient writers frequently mention the existence of conifers and used the pines, cedars and junipers as striking illustrations of strength, durability and permanency. The Romans used garlands of pine branches for crowning the victors in their games, and the wood to form their funeral pyres. The cones and seeds were considered medicinal and were sought after for flavoring their wines.

The rare gracefulness and artistic beauty of many of the evergreens were used as models by the sculptor. One of the old writers speaks of the preservative properties of the juice of the cedar and states it was used in preparing mummies.

The cedar of Lebanon is symbolical of durability. The wood was held in great respect by the ancients and the branches were employed in religious exercises.

The junipers and yews, perhaps, were more frequently mentioned and known than any other genus of the evergreens, and they were used extensively in all ornamental plantings.

In many places throughout the sacred writing we find the evergreens beautifully mentioned, the similes often being among the most eloquent passages known in the English language. The first author who wrote exclusively on trees and shrubs produced a book in 1523 on the subject of evergreens, and since then the French, English, Germans and Italians have paid the evergreen family marked attention. Other botanical authors have, during the present century, devoted much labor to the study and classification of this most important family. No other order of plants presents such a diversity of size as that of the evergreen family. From the humble, trailing sorts to the lordly *sequoia gigantea*, 300 feet in height, it embraces trees of every size.

Every shade and tint of gold, silver and green is also beautifully displayed in the foliage of the various species.

The evergreen family is limited to no particular climate or country, but is a native of the torrid, frigid and temperate zones throughout the world. On the coldest summits of the Alpine peaks of Lapland, at the very utmost limits of vegetation, are found many of the dwarf species, while, on the other extreme, some splendid varieties develop their beauty beneath the scorching sun of the torrid regions.

Anyone who has seen or studied European landscape gardening is immediately impressed with the extensive use of evergreens. They furnish the bulk of the material for the basic construction of their gardens. The English garden is chiefly famous for its evergreens, especially yews,

It is only within comparatively recent years that the American landscape architect, gardener and planter has awakened to the many and varied uses of evergreens and the important part they must necessarily take in garden making, if permanent and lasting effects are desired.



EVERGREENS IN BEAUTIFUL SETTING FOR MAUSOLEUM, GRACELAND CEMETERY, CHICAGO. EVERGREENS FROM D. HILL NURSERY CO.

which are, as you and I know, long-lived. The yew has been known and appreciated for ages and is yet one of the most esteemed evergreen trees. The Aukerwyke yew, near Staines, England, is supposed to be upwards of 1,000 years old.

The evergreen in one form or another is seen everywhere throughout Europe and from the sixteenth century onward their popularity has been pre-eminent.

Closely associated with Shakespeare and the historical gardens of England, at Stratford-on-the-Avon, is Anne Hathaway's garden, a masterpiece in landscape art, standing as a lasting monument to its original designer and planter. Surrounded by an evergreen hedge and filled here and there with masses of evergreens, it is a pattern and a guide to everyone aiming to have his garden a thing that will live after him and cause people to remember him. What finer monument can a man have? Our possibilities today are far greater than those of an artist who dabbles in paints, for we are handling as our materials real growing things whose beauty and protection is not attained in a day, but is attained year after year and down through the ages.

The green of our color scheme and background cannot fade or be washed away, but is a thing of permanency and a delight to each succeeding generation. The trend of all phases of education today is toward permanent results, and we must keep abreast of the times.

We are a new country—a lusty infant, it is true—growing and learning fast, but in the mad race for money during the last hundred years, in the main, it can be said that but scant interest has been given to permanency. Results are wanted in a day or week, at best, a few months.

Quick-growing, short-lived material has been used, with never a thought for the future.

Planters are now waking up to the fact that something is lacking—that something which gives solidity, strength and virility so noticeable in European gardens where the use of evergreens has predominated for centuries.

But we are learning fast. Fifty years ago it could be said that the average ornamental planting on a country estate consisted of 75 per cent deciduous stock and 25 per cent evergreens, whereas today, in the eastern part of the United States, along the Atlantic coast, the ratio is 65 per cent evergreen stock and 35 per cent deciduous, and this ratio is gradually spreading westward.

An example of how this works out with the average American business man is as follows:

A prominent man in one of our large Middle West cities, who had spent forty-five years of his life in money-making, suddenly found himself worth several million dollars.

A large income and a desire to turn his attention to other things besides grinding

out money took him on extended travels through the Eastern states and Europe, where he admired the many beautiful estates and examples of landscape gardening which aroused his enthusiasm for both building and landscape architecture.

When he reached home his cramped city quarters were so distasteful to him in contrast to the wonders, beauty and freedom of the homes and gardens he had seen, he decided he must have something of like nature for himself. So he secured the services of the best building architect in the country, who gave him a magnificent house, complete in every detail, built on a tract of ground some forty-five acres in extent, just adjacent to the city. He spends a small fortune on this magnificent structure and then the day arrives when everything is completed, and behold, what does he see?—a bare, uninviting, prison-like structure, and not until then did he realize that something was lacking.

So, discouraged, he wondered what to do—when along came the tree agent, into whose hands he placed the planting of his grounds. So many shrubs for so many dollars.

It is needless to go into detail of how this venture turned out, but suffice it to say that two or three years later he was still dissatisfied; the plantings consisted of a miscellaneous mass of various varieties, all planted entirely inharmoniously and without regard to proper arrangement.

His next experience was with a landscape gardener, who, while very conscientious, was not informed of the value of evergreens in the landscape and rarely used them.

This man was yet dissatisfied, and not until he had traveled more, and made more extensive and intensive study of the matter, did he realize that the permanent and magnificent all-the-year-round effects of the old world century-old gardens were wanted, and learned the value and necessity of evergreens.

We are to consider here chiefly the best varieties to use for various purposes and locations in the Middle West. Of the many European species we may discard a number that are not of any particular value. Generally speaking, I believe it is best to confine our Middle West planting to as few varieties as possible, selecting those only which are suited to our conditions. Evergreens are not particular as to soil. They prefer a light, sandy soil, but will do well in any well-drained soil. Evergreens must be selected with reference to the position they are to occupy, the purpose they are to serve, and their relation to the place where they are to grow.

For grouping at entrances, near dwelling houses, and for massing in formal plantings, dwarf evergreens are favorites, because they are always cheerfully in evidence and wide awake the year around. Among the best for this purpose are Ju-

niperus Canadensis, Pinus Mugho, Globe Arbor Vitae, Sabina Junipers, Juniperus Procumbens, Siberian Arbor Vitae, and Japanese Yew.

The list of medium growing sorts is more extensive, some of the most valuable being Hemlock, Juniperus Glauca, Juniperus

upon our deciduous trees and shrubs. The most common of the pests usually found upon evergreens in this locality are bagworms, borers, plantlice and scale insects. Most of these pests can be easily controlled through the use of proper spray mixtures, such as kerosene emulsion, whale oil soap



WINTER EFFECTS IN EVERGREEN PLANTINGS.
Graceland Cemetery, Chicago; Evergreens from D. Hill Nursery Co.

Schotti, Red Cedar, Pyramidal Arbor Vitae, American Arbor Vitae, Swiss Stone Pine, Pfitzerina Juniper, Concolor Fir, Peabody's and Douglas Golden Arbor Vitae, and Englemann Spruce.

Some valuable tall-growing sorts are White Pine, White Spruce, Douglas Fir, Austrian Pine, Black Hills Spruce, Red Cedar and Colorado Blue Spruce.

Of the small or dwarf growing Evergreens by far the best is Juniperus Canadensis and Juniperus Sabina Prostrata, which are native along the North Shore. They are splendidly suited to our conditions and excellent for rough banks, rocks and ornamental ground covers.

People often say, "I do not like evergreens; they are too melancholy"; and questioning will show that their principal acquaintance is with the Norway spruce. While it is true that the Norway spruce is useful and valuable for some purposes and locations, still the Norway spruce has done more than any other tree to injure the popular demand for evergreens.

The diseases of evergreens are comparatively few, and, as a general rule, mostly confined to a few species and restricted probably to certain conditions of atmosphere and soil. A common source of disease is that of an imperfectly drained soil. To be sure, evergreens have some insect enemies, but these are few indeed, compared with the myriads of insects preying

and nicotine washes, applied at the proper season. Insect injury is most apparent and severe following a hot, dry season like the summer just passed.

The entire system of pruning an evergreen depends very much upon the same principles that govern the trees of other classes. Many evergreens are spoiled through a mistaken idea of beauty, by having their lower branches cut off, and thus forming a long, naked stem, considered very distasteful to the intelligent evergreen planter. An excellent plan to preserve a perfect shape is to extract the center bud from any shoot that projects beyond the proper limit.

Most of the upright junipers, hemlocks, arbor vitas and cedars are benefited by an annual pruning, either in early spring or late summer, of the over-luxuriant branchlets, thereby causing them to thicken and otherwise vastly improve in appearance. When the leader or main stem of an evergreen becomes destroyed by accident or otherwise, a new one may be readily formed by tying up a side branch in as nearly an upright position as possible. Two leaders should never be allowed to remain. The stronger should be selected and the other cut away as soon as noticed. As a general thing, don't be afraid to trim or prune evergreens; keep the knife on them constantly. Proper trimming will keep them to any height desired for years.

PARK NEWS.

The annual report of the Park Commission of Atlanta, Ga., recommends the purchase of three additional acres to increase the size of Mozeley Park, in West End. A school building is also needed in this district, and a building suitable for this purpose is already situated on the proposed tract.

Olmstead Brothers, of Brookline, Mass., recently made a thorough inspection of Louisville (Ky.) parks and reported what they thought the park system of this city needs. Among them are: That Louisville should have a city planning commission; that park scenery should not be marred by the erection of public buildings in landscape parks; that the city government should invest much more largely in land, for parks, parkways, playgrounds and ornamental squares.

William H. Lindsey, superintendent of the Department of Parks and Public Property at York, Pa., in his annual report to the council tells of the improvements which have been made to Farquhar Park and Penn Common. He recommends that Albemarle Park be enlarged and that Newberry street be opened northwardly so as to make parts of Farquahar Park more accessible.

At the regular meeting of the Board of Town Trustees of Los Angeles, Cal., Mrs. J. E. Ellis offered the board to set out plants in a portion of the park surrounding the new town hall.

John Nolen, landscape architect, of Cambridge, Mass., had an interesting contribution on city making in the *California Outlook* of recent date. In discussing the creation of a park system, he says: "In nothing is a city so permanently benefited as in the selection of sites and the construction of an adequate system of playgrounds and pleasure parks. If you agree to the standard accepted elsewhere, no city in California has yet a park system; for a park system should be comprehensive, including city squares, equipped and supervised playgrounds and playfields, small or urban parks, large or suburban parks, and scenic reservations, all connected, one with the other, by parkways or boulevards. And to be adequate, such a system should not only meet the demands of all classes of citizens in all parts of the city today, but should reasonably anticipate the needs of the future."

New Parks and Improvements.

Mayor H. A. Finch, of McKinney, Tex., recently donated five acres to the city for a park.

St. Louis' plans for a Central Parkway and an outer park system were praised

highly recently by Henry Wright, a landscape architect, in an illustrated lecture on "The Economic Side of City Planning," before members of the Engineers' Club of St. Louis in the Academy of Science.

The Orange (Tex.) County Commissioners' Court has adopted plans for the establishment of a public park on the courthouse square, and the work will begin in a short time.

At a recent meeting of the City Council at El Campo, Tex., it was decided to plant more shade trees in all the city parks. The variety decided upon is the *Ligustrum Japonica*. Something over 100 trees are being planted.

Of the \$3,400,000 bond issue at Kansas

City, Mo., \$500,000 will be allotted to park improvements; \$350,000 of this amount will be spent in improving Swope Park.

Excavations have been begun at Alamo Plaza, San Antonio, Tex., the new rose garden park to be built in the heart of the city.

Two pieces of park property are offered to the Park Board of Dallas, Tex., by J. F. Strickland and Osce Goodwin. The properties are Kirkland Park, 82 acres, and Glendale Park, 32 acres.

T. Glenn Phillips, landscape architect, of Detroit, Mich., announces the organization of the firm of Phillips, Wilcox & Kruse, landscape architects, 1601-2 Kresge building, Detroit. The firm is composed of T. Glenn Phillips, Raymond H. Wilcox and Arthur M. Kruse.

Geo. C. Kessler, of Dallas, Tex., has completed the revision of his proposed plan for the improvement of the grounds of the University of Dallas.

CEMETERY NOTES

The Oneota Cemetery Association, of Duluth, Minn., recently met and planned improvements. Dr. Burnside was chairman of the meeting and John Hall was secretary.

Mrs. Elizabeth Farnsworth was elected president and Mrs. Renna Bowermaster secretary at the annual meeting of Summit View Cemetery Association, of Ottawa, Ill.

A committee of the State Line Cemetery Association, of Texarkana, Ark., is raising funds for maintaining the cemetery.

Figures compiled by Superintendent W. J. Barry, of Oakwood Cemetery, Dixon, Ill., show that during the twelve months the largest number of interments was made in June.

The Ladies' Cemetery Association, of Norwood, Ill., recently gave a "hard times" social at the home of Mr. J. B. Lafferty, for raising funds for the cemetery.

The annual meeting of the Riverside Cemetery Association, Dodge Center, Minn., was held a short time ago at the office of the secretary, D. T. Rounseville.

At the annual meeting of the trustees of the New Providence Cemetery Association, Taraine, Ill., recently, Treasurer L. C. Shriver and Secretary R. E. Laycock were each re-elected for one year.

The annual meeting of the Ward Cemetery was held at the town hall in Verona, O., in January, for the purpose of electing one director and discussing other business that may come before the meeting.

At the annual meeting of the Rienzi Cemetery Association, recently held in Fond du Lac, Wis., M. Wagner was elected president and C. W. Henry secretary.

The Scandinavian Cemetery Association, of Rockford, Ill., recently held its annual meeting, and C. A. Lundvall was re-elected president and C. F. Nordstrom secretary-treasurer. Burials for the year were reported as 208, extensive improvements have been made, including cement walks and brick roads and gutters. It was decided to plat the addition to the east of the present grounds for use at once.

A joint meeting of the Seward Cemetery Association and the Mound Association was held in January with Mr. and Mrs. Peter Crook.

The annual meeting of the Pleasant View Cemetery Association, Mankato, Minn., was held at the Minnesota State Bank.

The annual meeting of the stockholders of the Oakland Cemetery Association, Clinton, Ia., was held in the First National Bank parlors and Howard Romer was appointed superintendent and Geo. Buecher president.

At a meeting of the Riverview Cemetery Association, of Streator, Ill., held in the secretary's office, President E. H. Bailey and Secretary George Goulding were re-elected. The secretary's annual report showed that \$825 had been added to the perpetual care fund, which now amounts to \$1,525.

The annual meeting of the Lakeside Cemetery Association, of Biwabik, Minn., was held at the office of the Myers Company. H. G. Seeley was re-elected secretary and treasurer. Terms of other officers had not expired.

L. W. Hickman was elected president and A. E. Householder secretary at the annual meeting of the Lovettsville Union Cemetery Co., Frederick, Mo. The treasurer's report showed the assets of the company amounted to \$1,429.36.

A meeting of the stockholders of the Athens Cemetery Association, of Athens, O., was recently held in the Mayor's office and J. B. Allen was elected president and O. B. Sloane secretary. This company was only organized a year ago, but in that time has made many improvements in the city cemeteries.

At a recent meeting of the Board of Directors of the Manchester Cemetery, Manchester, Ill., it was voted to prohibit the erection of a community mausoleum. Chas. Thady was elected president, and John Robson secretary.

The Grand Forks Cemetery association, Grand Forks, N. D., met at the Commercial Club rooms recently and elected C. C. Gowran president and M. Krogsrud secretary.

Lot owners of Bellaire Cemetery Association, Bellaire, W. Va., at their annual meeting elected the following trustees for the ensuing year: Geo. Pracht, William Porterfield, J. B. Gibson, Clarence Simpson and William Marlin. D. H. Darrah was elected treasurer.

At the annual meeting of the Appleton Cemetery Association, of Appleton, Wis., recently, the officers were re-elected, as follows: President, Herman Erb; vice-president, Humphrey Pierce; secretary-treasurer, Joseph Koffend, Jr. The treasurer's report showed the total receipts to be \$11,254.24 and total disbursements \$10,573.24, leaving \$681 cash on hand.

The Greenmount Cemetery Association, of Quincy, Ill., has elected August Husemann president and George Julfs secretary.

The annual meeting of the Woodhull Cemetery Association, of Woodhull, Ill., was held recently in the town hall.

The annual meeting of the lot owners of Maplewood Cemetery Association, Luverne, Minn., was held a short time ago in the directors' room of the First National Bank.

The annual meeting of the South Henderson (Ill.) Cemetery Society was held in January in the South Henderson U. P. Church.

The Nichol Cemetery Association, of Marseilles, Ill., met with Mrs. Mary Butters recently.

The annual meeting of the Estabrooks Cemetery Association, Fond du Lac, Wis., was recently held.

The regular annual meeting of the trustees of Zion Cemetery Association, Pawnee, Ill., was held recently for the purpose of electing two trustees for the ensuing year and transacting other business.

At a special meeting of the City Council at Suffolk, Va., recently, J. S. Dennis

was appointed as keeper of the cemetery, in place of Robert H. Almond.

Vandals have been entering the cemetery at Evans, Colo., recently and destroying several monuments. As a result, a special man has been appointed to watch the cemetery grounds.

Secretary W. S. Prie, of the Forest Home Cemetery Association, Milwaukee, Wis., has reported to the county judges that \$213,618.58 is the principal now held in trust for care of lots and that \$6,966.30 was expended in 1914. The money is invested in first mortgages.

Officials of the War Department are co-operating with the members of the Fine Arts Commission in efforts to preserve the natural beauty of the Arlington National Cemetery, Washington, D. C., and to permit of its development on lines of artistic simplicity. At the suggestion of the Art Commission, Q. M. Gen. Aleshire has directed a restriction, so far as possible, of future interments in the cemetery to such areas as will not interfere with the landscape effect on the completion of the proposed amphitheater and chapel and the approaches from the cemetery to the projected memorial bridge across the Potomac River to the marble Lincoln memorial in West Potomac Park. Steps are also being taken to restrict the design, height and cost of individual monuments.

The following brief statement from W. H. Graves, superintendent of Hudson City and Cedar Park Cemeteries, Hudson, N. Y., gives the main features of the work of the Cemetery Commission for the past year. The present commissioners, Michael Paicr, Geo. H. Tator and Wm. H. Parker, are maintaining a high standard of cemetery efficiency, their grounds having acquired quite a reputation for judicious management. Receipts: City appropriation, \$1,000; from annual care of lots, \$1,224.80; from interment fees, \$1,661; from foundation work, \$450.21; from sale of lots and posts, \$2,416.70; from 3 per cent on perpetual care fund (balance to accrued interest per cent), \$604.50; from miscellaneous sources, \$286.56; balance on hand January 1, 1914, \$236.79; total receipts, \$7,880.56. Expenditures, 1914-1915, \$6,589.62. Total amount of perpetual care fund, \$24,398. Area of lots sold, 1914, 6,618 square feet; new water pipe laid, 400 feet; new tile laid (mostly 30-inch), 400 feet; foundations built, 96; cement walks and steps built, 400 feet; spent in regrading in old section, \$411.32; improvements in Cedar Park, \$271.38; number of interments this year, 298; vaults set, all kinds (mostly cement), 52. A new heater has been installed for the chapel and extensive repairs made to stable and tool house. The commission continues to add yearly a number of new shrubs and about 100 trees from their own nursery has been set out on the grounds.

Forty-five unemployed married men have

been put to work at the North Burial Ground, Providence, R. I., by Superintendent Warren in connection with the filling and grading work there which has been begun following the appropriation of \$5,000 for the purpose by the City Council. The men given work were recommended by Overseer of the Poor Cummings and the Emergency Job Bureau as being needy, and a full week's work will be provided for all. At the end of each week forty-five other men will be put on, and this shifting process continued until the task is done. It is expected that about six weeks will be necessary for the job, and that about 270 men will be given some temporary assistance.

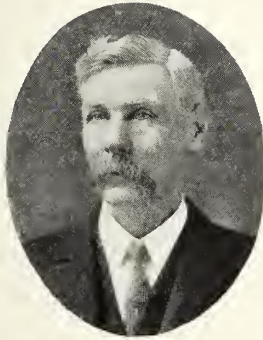
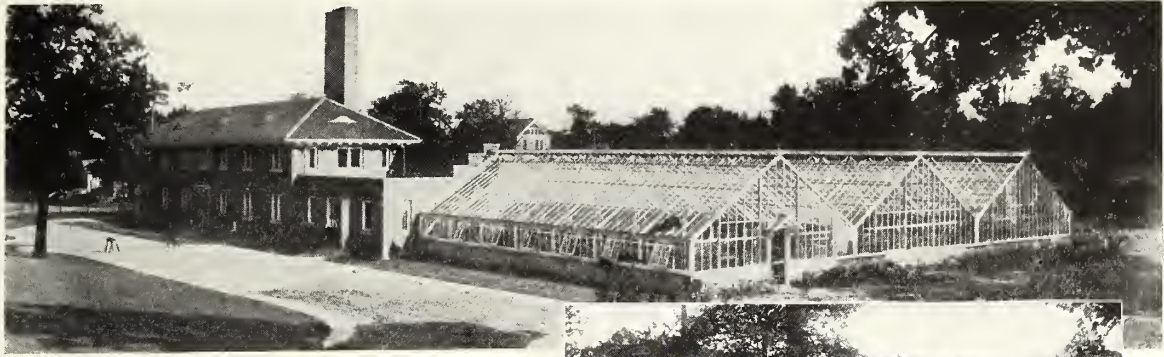
Following are some facts and statistics from the annual report of Hamilton Cemetery, Hamilton, (Ont.) Canada: Amount for perpetual care funds received during 1914, \$11,014.47; amount for perpetual care funds received during 1913, \$13,748.80; total amount for perpetual care fund, \$114,292.31; number of burials, 1,236; amount of ground sold, square feet, 29,723; single graves (adult) sold, 118; single graves (children) sold, 222; lots sold during year, 211; old lots placed under perpetual care, 97; total of lots sold in cemetery, under perpetual care, 2,664; total of lots sold in cemetery, under yearly care, 4,927; ground for sale under perpetual care, 236,000 square feet. After the heavy portion of the season's work was completed it was found possible to provide labor for some five extra men throughout the winter by commencing the reclaiming of the large ravine at the rear of the cemetery, to which end a road was constructed down the hillside, which should be widened in the spring, and the ravine provides wonderful opportunities for a natural park with lakes and drives throughout. The board was able to arrange for a renewal of the investment of \$100,000 of the perpetual care funds for a further term of five years at even better terms than before. It will be possible to have, when the present cemetery is entirely disposed of, a fund approaching \$200,000.

The Jordon Cemetery Corporation, recently incorporated, as noted in our last issue, is located at Waterford, Conn., a suburb of New London, instead of at Waterford, Mass., as reported.

The Philadelphia Lawn Mower Co. has just issued a small booklet giving a few testimonials from users of the Genuine Philadelphia Mowers. The book contains much strong praise of this mower line, and a long list of parks, cemeteries and public grounds where the Philadelphia mowers are in use.

C. S. Harrison's Select Nursery Co. has just issued the third edition of its Peony and Iris manuals, that give many facts of interest about the use of these popular plants in the arid regions.

Superintendent J. D. Richardson, of the City of London Cemetery, Little Ilford, Essex, London, writes that his cemetery has



A Letter from Supt. of
Oakland Cemetery
Association
St. Paul, Minn.

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F. D. WILLIS, Secy. & Supt.

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issued a very interesting collection of pictures, both oil paintings and engravings, being well represented in their crematorium and waiting rooms. The collection contains such interesting pictures as the "Deposition of the Cross," "Christ Weeping Over Jerusalem," a portrait of the Duke of Wellington, with his signature and seal, "The Raising of Jairus' Daughter," "The Adoration of the Kings," "Angels Appearing to the Shepherds," and others.

New Cemeteries and Improvements.

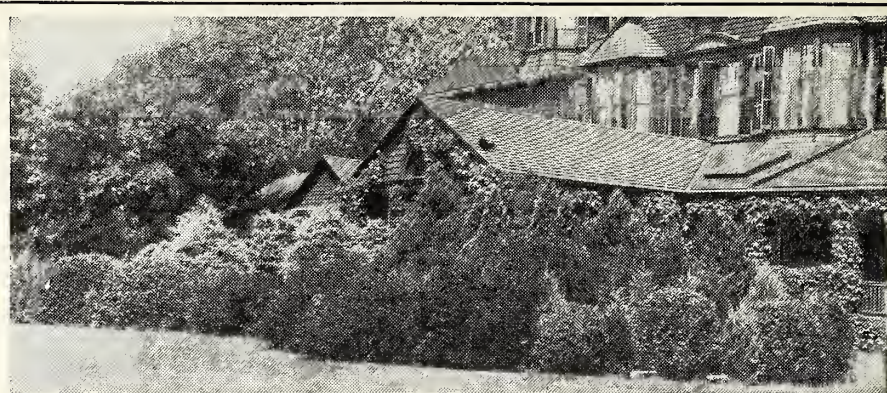
Old Mt. Tabor Cemetery, just southeast of Crawfordsville, Ind., was recently incorporated by John S. Burk, William N. McMurray, Kizzie Warren, Martha Whitley, Oscar Martin and Ota Warren, and was renamed Burk Cemetery.

An association has been formed by the active members of the former Cemetery Protective Associations for the purpose of beautifying the city cemeteries of San Francisco, Cal.

Mayor Keller, of Toledo, O., in a letter to the council recently, requested that a chapel and a comfort station be built at Forest Cemetery, to cost about \$10,000. He urged the council to issue bonds for these improvements in the cemetery, which makes between \$2,000 and \$3,000 for the city annually.

THE COVER ILLUSTRATION.

The entrance to Fairview Cemetery, Niagara Falls (Ont.), Canada, illustrated on the cover of this issue, is a good example of the massive post type of entrance with a very ornamental type of iron gateway used for both the main entrance and the walks. The scroll work is unusually elaborate in design and is carried out in a harmonious pattern on both main and side gates. There is no archway used, but the name of the cemetery is carried out on tablets attached to the posts. The metal lanterns also add a very decorative touch to the general effect, and serve a very utilitarian purpose at night. This is a very good example of the lighter type of entrance gate that can be built at a very reasonable cost, without sacrificing anything in looks or in good construction. These gates are the work of the Stewart Iron Works Company, of Cincinnati, O.



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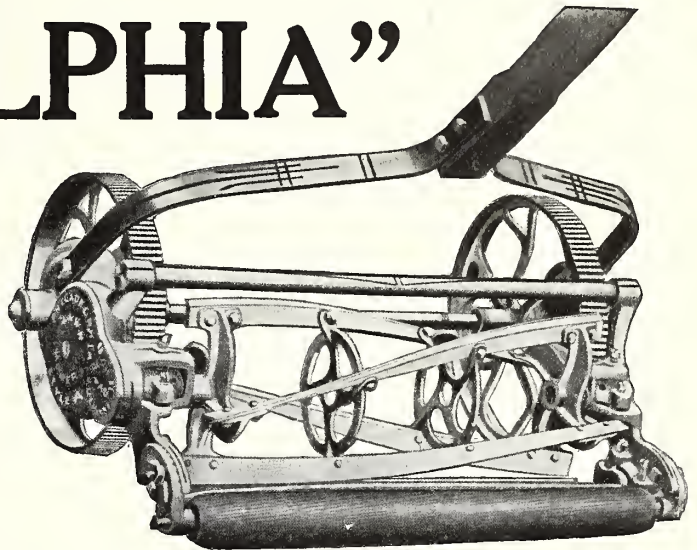
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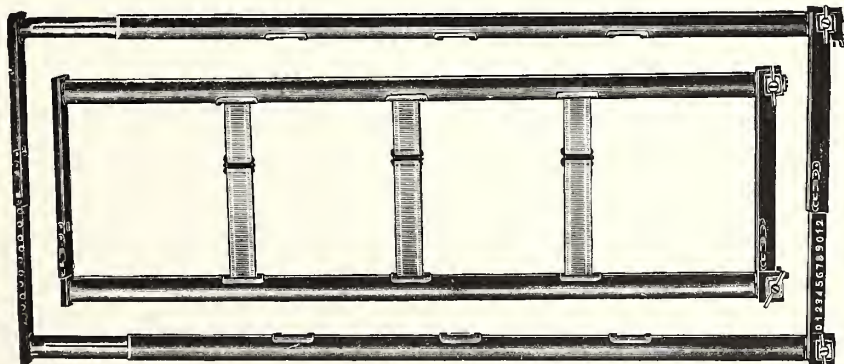
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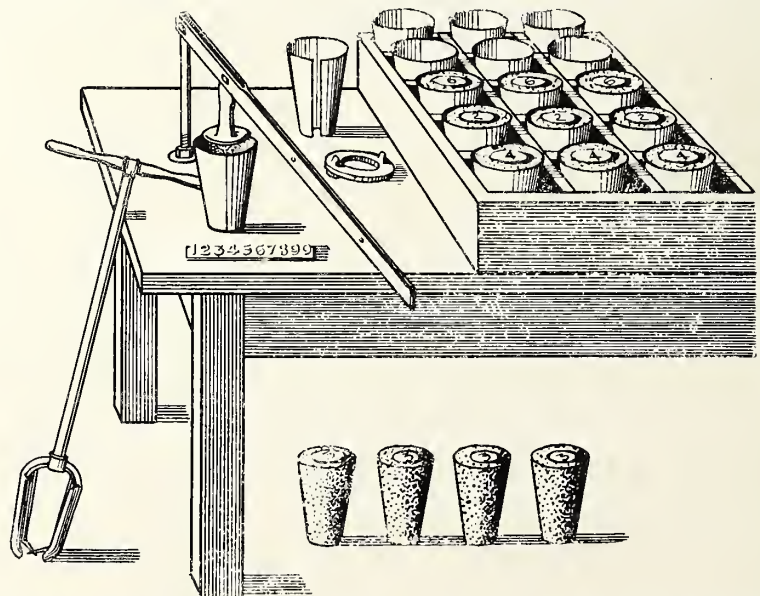
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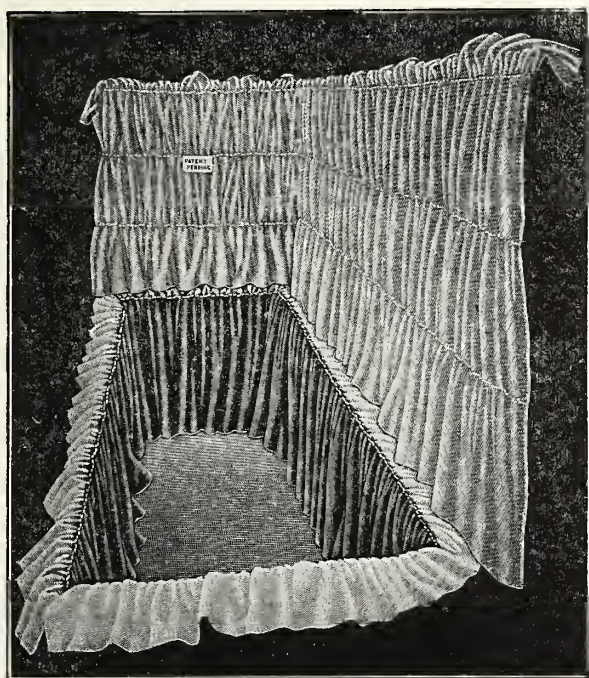
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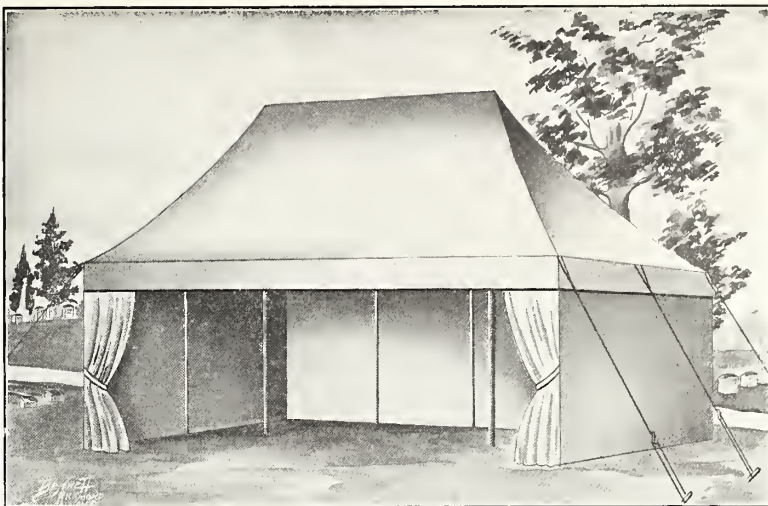
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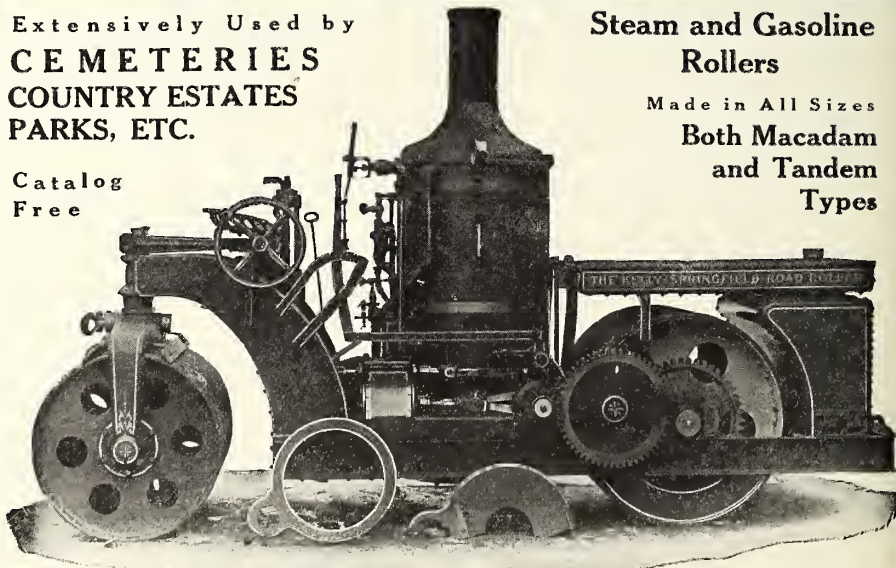
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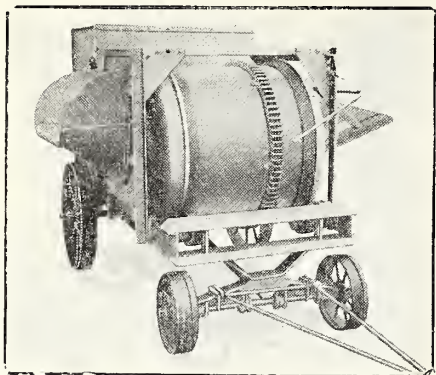
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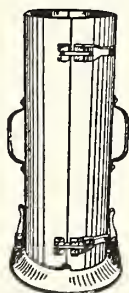
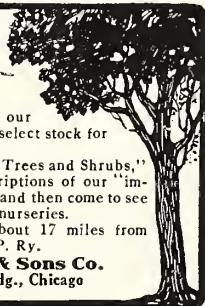
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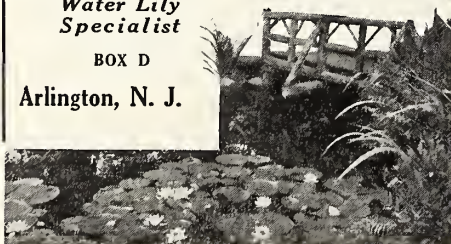
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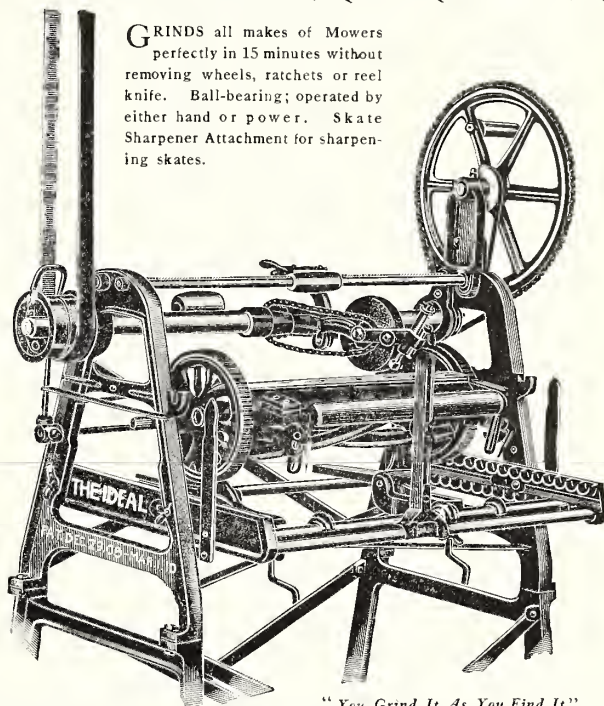
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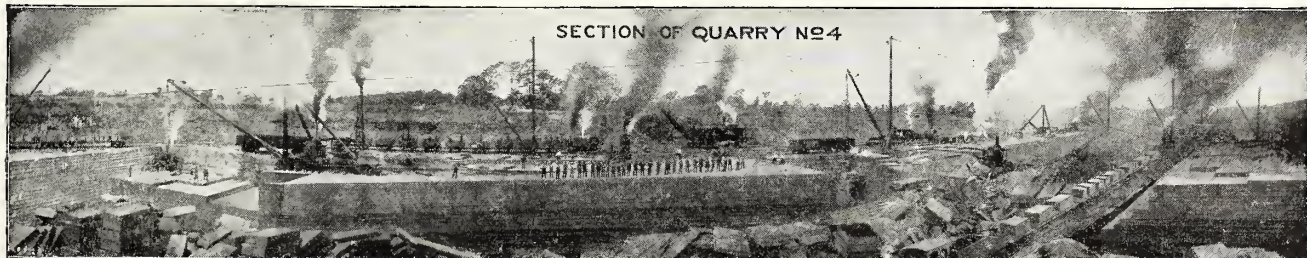


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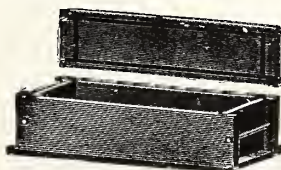
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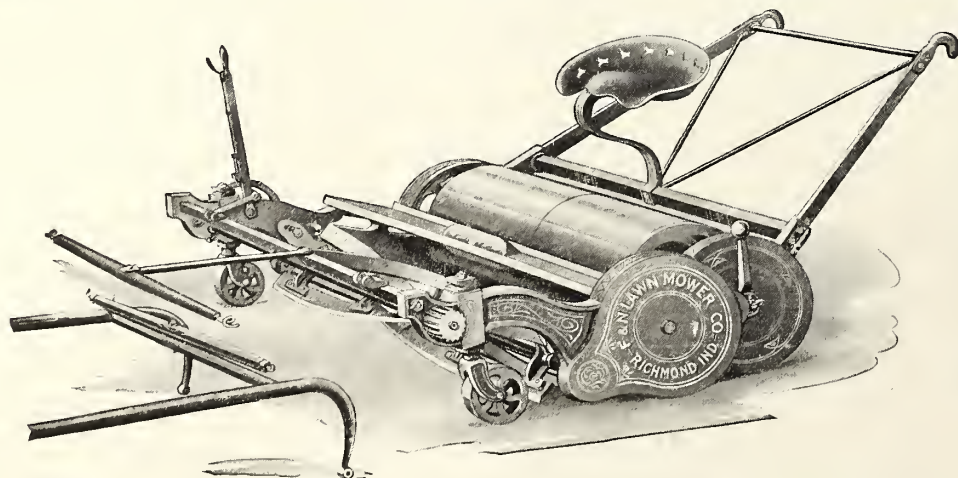
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